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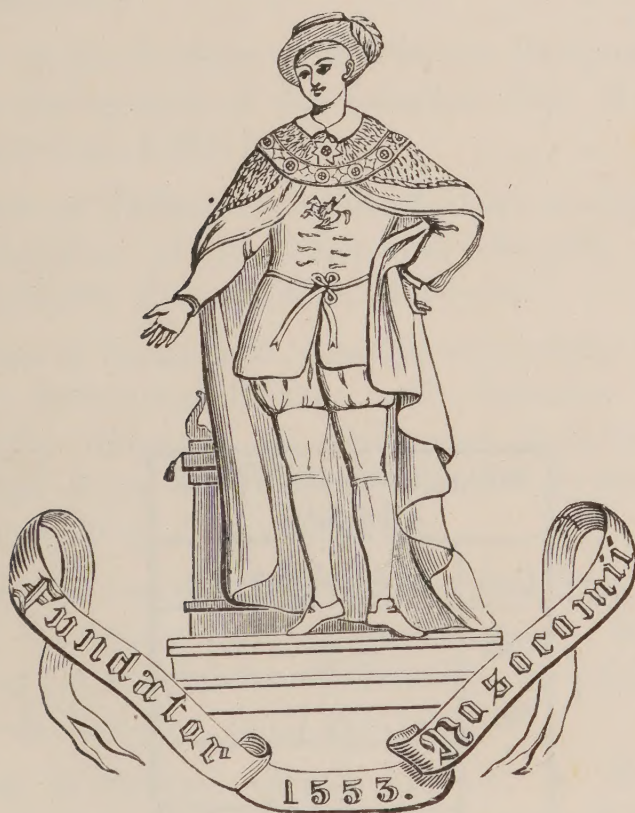


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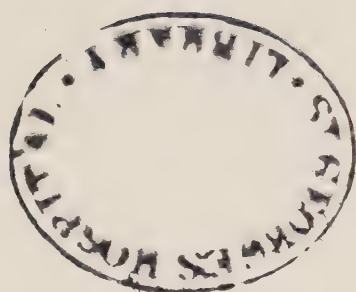
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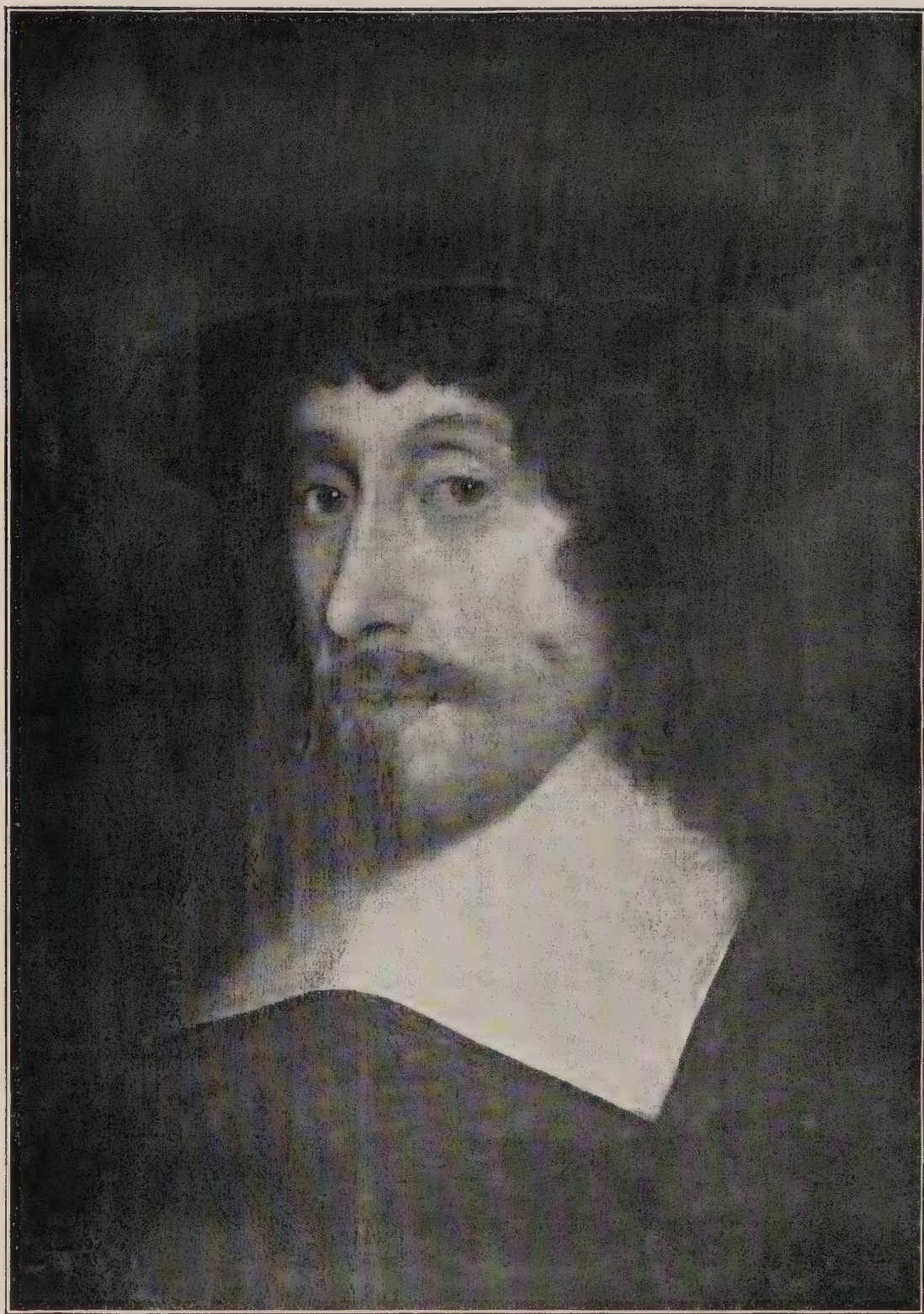
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THOMAS WHARTON, M D.

ON SOME OLD PHYSICIANS OF ST. THOMAS'S HOSPITAL.¹

BY J. F. PAYNE, M.D.Oxon., F.R.C.P.,
PHYSICIAN TO ST. THOMAS'S HOSPITAL.

It would be impossible for me on the present occasion to enter systematically upon the history of the medical staff of our ancient foundation. All I can hope to do in the fragmentary observations which I have collected is to draw attention to the merits and distinctions of some few who stand out pre-eminently among their fellows, and to pay to others of lesser fame the modest tribute of respect which our predecessors deserve at our hands, that their memory may not entirely perish.

In attempting to give an account of the St. Thomas's physicians the first difficulty which meets us is, we do not know precisely when the Hospital first had a physician. In old times the staff was exclusively surgical. It was so, I believe, through the Middle Ages before the second foundation of the Hospital by Edward VI in 1553, though we know little of its history in those early times. Certainly, on its reconstitution there was no physician immediately appointed; nor, as I think, for some time afterwards. This was also the case with our great rival or sister foundation, St. Bartholomew's.

Also we must remember that during the time of which I

¹ An Address delivered before the St. Thomas's Hospital Medical and Physical Society, December 2nd, 1897.

am going to speak there was only one physician to the Hospital, and no assistant physician.

The earliest physician of whom I can discover any precise information is Dr. Eleazer Hodson. I do not at all think that he was the first, but his predecessors are lost in obscurity. Dr. Hodson was appointed in the reign of James I, probably about 1620. He was a native of Durham; educated and graduated at Cambridge, being incorporated M.A. at Oxford July 12th, 1608, but took his Medical Degree at Padua in 1612. He became Fellow of the College of Physicians in 1618, and practised in the City of London. A contemporary physician, Dr. Baldwin Hamsey (in some interesting MS. lives of physicians, in Latin, now belonging to the Royal College of Physicians), gives the following account of Hodson :

“ Dr. Hodson, physician to St. Thomas's Hospital, gradually fell into a wasting, and ceased to pine away on the 19th January, 1638-9. A man of lively intellect and countenance, second to few of his fellows in sagacity, skill in languages, and skill in his art. Fond of a fine house and a fine horse, he lived a bachelor, having as his most intimate friend Dr. Fox, who was his comrade in Italy, in the College, in practice, and in celibacy. When first, as a Censor, he courteously invited me to be examined, he approved me and afterwards became my friend. For the rest, he was neither immoderately fond of gaining money, nor too careless of it; never overwhelmed with practice, nor without patients; the latter result was prevented by his talent, the former he studiously avoided. He was fond of spending some weeks in the country during the summer, and in this followed the example of his friend Fox.

“ When about to die he showed his benevolent disposition equally to the College and to his heir, whose estate he very largely increased, but without exciting any ill-will.”¹

From this it would seem that Dr. Hodson was a benefactor to the College of Physicians, but to what extent or in what way is not recorded.

The next physician to St. Thomas's was Dr. Thomas

¹ The Latin original is in Dr. Munk's 'Roll of the College of Physicians,' 2nd edit., 1878, vol. i, p. 172.

Grent, who was, I am afraid, no very great ornament to our foundation. He was of New College, Oxford, M.D. of that University, and admitted Fellow of the College of Physicians in 1623. Grent was made physician to St. Thomas's on the death of Hodson, being elected at a Court of Governors, 4th February, 1638-9, in obedience to the direct orders of King Charles I. The king was moved, we are told, by the influence of the Countess of Denbigh, to whom the doctor's wife was related. Apparently through ill-health, Grent became unable to discharge the duties of his office, and at a Court of Governors held 7th December, 1640, Dr. Francis Prujean (of whom more hereafter) was appointed a temporary substitute for him, and was further elected to the reversion of the physicianship, to succeed if Grent should die within six months. Dr. Grent lived till 11th December, 1649, when he died in great poverty. During his lifetime the Governors had several times voted him gratuities of £20 or £40 in addition to his stipend, "in regard of his extraordinary pains and care taken for the poor of this house;" and after his death their bounty was extended to his widow. His contemporary, Dr. Baldwin Hamey, in the MS. already referred to, has left a very unflattering account of Dr. Grent, which is given in Dr. Munk's 'Roll of the College of Physicians;' but, except so far as he reports Grent's want of success in his profession, it seems spiteful and exaggerated.

This is a translation of Hamey's epigrammatic Latin:—
"He (Grent) lived without the good-will of his seniors, and, as naturally follows, without the respect of his juniors. Nor was he more happy in his relations with the citizens of London. For as he was physician to St. Thomas's Hospital, and had not obtained the post by the votes of the Governors, but had been appointed without notice by the king's direct commands (a grace easily obtained through the favour which the Countess of Denbigh enjoyed with the king; and in turn through the interests of Doctor Grent's wife with the countess, her kinswoman and former mistress), so it followed that he was not an acceptable person to the Hospital authorities, and beyond his modest stipend as physician he made hardly any income. Not that he was

specially illiterate, but, as the phrase is, '*insulsus*,' wanting in common sense, not without industry, but incapable of moderation, and in silly babbling next door to a fool [*blaterando proximus futilitati*]."

Poor Dr. Grent! he comes off rather badly in Dr. Hamey's bitter epigrams, and was evidently a failure in life; but it is only just to recall the notice of him already quoted from our Hospital Court Book, and also that the College of Physicians voted to his widow half the profits of their new Pharmacopœia: "Halfe of the money due for the Dispensatory was by the Colledge given to Mrs. Grent, in regard of her husband Dr. Grent, his great poverty at his death," at the Comitia held 13th December, 1649.¹

The next physician was a very eminent man, Dr., afterwards Sir Francis Prujean, Physician to King Charles II, and for years President of the College of Physicians. He was also a person of great literary and scientific attainments, and a notable connoisseur in the fine arts.

He was born, according to Dr. Munk, in Essex, and entered as a sizar of Caius College, Cambridge, in 1610. He graduated as M.B. 1617, and M.D. 1625. He became Licentiate of the College of Physicians 1621, and Fellow 1626. After obtaining this diploma he seems to have lived for some years in the country, in Lincolnshire apparently, and came up to London about 1639. He held various offices in the College of Physicians, culminating in that of President, to which he was elected in 1650, and which he held for five years. When the great Harvey was elected President of the College in 1654, he excused himself on the ground of his age and infirmities, and recommended the continuance in office of Dr. Prujean, who had already been four years President.

Dr. Prujean was, as we have seen, acting as physician to St. Thomas's before the death of Dr. Grent, but he was formally elected physician on 14th December, 1649. He held this office till 23rd January, 1651-2, when his many engagements compelled him to resign.

He was knighted by Charles II on 1st April, 1661, and died 23rd June, 1666, being buried at Hornchurch, Essex.

¹ Munk, '*Roll Coll. Phys.*,' i, 184.

Sir Francis directed by his will that a monument should be erected there to himself, his first wife, and his deceased son, Thomas Prujean, also a doctor and Fellow of the College of Physicians at the same time as his father. His friend Dr. Baldwin Hamsey was to write the epitaph, and a very elaborate piece of Latin resulted, which is given in full by Dr. Munk. It commemorates the accomplishments of Sir Francis, who, besides being a master of his own art, was skilled with "the pencil, the turning-lathe, and the lyre." It states that his land and money, with great store of books and treasures, were left to enrich his two grandsons, and sums up the character of the doctor in the following curious lines :

Summatim cupis habere lector omnia ?
 Quæ in *Prujeani* nomine, primam facit *Prudentia* syllabam
 Hæc porro, in totâ hominis vitâ, utramque fecit paginam.

"Reader, would you have all this in a summary form ?
 That which, in the name of *Prujean*, makes the first syllable to
Prudence—
 That, in this man's whole life, made every page."

This quaint sentence seems, in the guise of a pun, to have conveyed some truth, for Sir Francis, who began life as a humble sizar, is said to have died very rich. A year before his death he married, as his second wife, Lady Margaret Fleming, daughter of Lord Gorges, and, says Pepys, "lived very handsomely, this lady bringing him to it."

But Sir Francis was distinguished for other qualities than that of being able to make a fortune. He is referred to with marked respect by the two well-known diarists of the time—Pepys and Evelyn. Pepys tells us (24th October, 1663) that Prujean acquired great honour by his attendance on Catherine, the queen of Charles II, in a severe attack of spotted fever (or typhus), and that Her Majesty's recovery was universally ascribed to a cordial prescribed by him in a critical moment, which, in her despair, did give her rest, and brought her to some hopes of recovery.

From Evelyn's diary the following passage is quoted (9th August, 1661) :—"I went to that famous physician Sir Francis Prujean, who showed me his laboratory, his work-

house for turning and other mechanics, also many excellent pictures, especially the Magdalen of Caracci, and some incomparable *paysages* done in distemper. He played to me likewise on the polyphone, an instrument having something of the harp, lute, and theorbo, by none known in England, nor described by any author, nor used but by this skilful and learned doctor."

Sir Francis, we are told, was a man "of very great judgement, but hath writ nothing to leave his name to posterity." With the regret indicated in the last sentence I fully agree. Many physicians, the most noted in their day, have left no works behind them. As a medical biographer I always wish that they had, for the book reveals the man, and, whether good or bad, forms some kind of monument of the writer; often, indeed, it marks a grave that would otherwise be without distinction.

Sir Francis Prujean was a man of whom as physician to St. Thomas's we may be proud. One who was recommended by Harvey as the fittest President of the College of Physicians, and who enjoyed such universal respect and high distinction in his lifetime, will not be forgotten, though he left nothing written by which we can judge of his medical capacity. The fine portrait of him by Streeter in the Medical Committee-room is the best work of art we possess, commemorating any of our staff.¹

About the son, Thomas Prujean, it may be mentioned that he presented to the College of Physicians a collection of surgical instruments, even then very remarkable, and now of great historical interest.

When Sir Francis Prujean resigned the office of physician his place was filled by Dr. Edward Emilie, who was appointed by the Court of Governors 23rd January, 1651-2, after a contest with a gentleman whose name, as given in the Court books, I cannot decipher. Of Dr. Emilie there is

¹ The College of Physicians possesses another portrait of our physician, bought in 1873 from Miss Prujean, a direct and, it is believed, the last surviving descendant of Sir Francis. This was painted in 1662, and is supposed to be also by Streeter. Dr. Munk, for some reason which I do not know, supposes the St. Thomas's portrait to represent Dr. Thomas Prujean, the son of Sir Francis mentioned above.

not much to be said. We learn from Dr. Munk that he belonged to an old family of that name at Helmdon, Northampton, that he became M.D. of Leyden in 1640, and afterwards incorporated with the same degree at Oxford in February, 1641-2. Being then qualified for the Fellowship of the College of Physicians, he was elected in May, 1647. He was Gulstonian Lecturer, and also delivered in 1656 the first oration on Harvey's foundation, the well-known "Harveian Oration." On this occasion he gave offence by inveighing too strongly against the army, thus reflecting on the Government of the day, that is the Protectorate of Cromwell. The matter was brought before the Censors' Board; the orator declared he did not mean any harm, but ultimately it was resolved that in future all Harveian Orations should, one month at least before they were delivered, be read through and approved by the President and one of the Censors,—a provision which, I may say, has happily fallen into abeyance. Dr. Emilie died 6th November, 1657, barely forty years of age, and was buried in St. Olave's, Silver Street. Dr. Baldwin Hamley says that his funeral was attended by the whole College of Physicians, and many other persons, including the Bishop of Chichester (such were the times!) without a bishopric. Emilie, he says, was "a sagacious investigator of disease, careful in prognosis and successful in treatment, as was often shown in his public practice at St. Thomas's Hospital, where he was the chief physician. He had greatly distinguished himself in the discharge of the duties of Gulstonian Lecturer, in which he 'treated of Atoms not less learnedly than of Anatomy.'

"In fine, nothing but time was wanting for him to obtain high distinction in our art, for it was impossible but that an abundant harvest would have followed a crop which was so promising in the green blade."

After Dr. Emilie's untimely death there was a keen competition for his place. A large number of physicians presented themselves as candidates, including such eminent names as Dr. Barwick, Dr. Collins, and others. At the court held November 20th, 1657, after "a free and fair election," as our annals record, the choice of the governors fell upon one of the most distinguished men on our roll, Dr. Thomas

Wharton. Every student knows the name of Wharton's duct, and this notable discovery in anatomy was only one of the services rendered to science and medicine by our eminent physician. Dr. Wharton was born in 1617 at Winstone, Durham, and educated first at Pembroke College, Cambridge, afterwards at Trinity College, Oxford. On the outbreak of the Civil War he removed to London, and studied under Dr. John Bathurst, physician to Oliver Cromwell. When Oxford was taken by the Parliamentary party he returned to the University, and was *created* Doctor of Medicine May 7th, 1647, in virtue of letters of recommendation from Sir Thomas Fairfax, the great Parliamentary general.

To receive a degree by *creation* meant exemption from the ordinary exercises or examinations. This may seem to be a strange method of obtaining a medical degree, but at that time there were several similar instances. During the Civil Wars continuous study was impossible, and Oxford especially was, during the Royalist occupation, more "a place of arms" than a place of learning. Hence there were learned persons well deserving degrees who had not gone through the prescribed studies and exercises. For such a way of admission was provided by the favour of important persons. Fairfax, belonging to a family renowned in letters, himself a man of culture, and so good a friend to learning that his first care when Oxford surrendered to him was to place a guard over the Bodleian Library, was the sort of patron likely to recognise scientific promise. The recommendation was equally creditable to the general and to the young physician. Sydenham also owed his degree to an exercise of political influence by the Earl of Pembroke, equally wise and still more important in its results. After the Restoration, a large number of Royalists who had been prevented from completing their studies at the Universities obtained degrees on similar terms.

Returning to London, Dr. Wharton became in due course Fellow of the College of Physicians (December 23rd, 1650), but, as we see, waited some years before he was elected to St. Thomas's.

It will not be necessary to dwell on Dr. Wharton's life, but I may say that he was chiefly known in Anatomy by his

researches on the glands published in a little book, 'Adenographia,' of which I show you a copy. It was of great importance in its day. The great Boerhaave, of Leyden, speaks of Wharton as "a most eminent anatomist, of the greatest authority in that science, a man of integrity and of the highest repute; not a great reasoner, but relying exclusively on the dissecting knife." Dr. Wharton acquired a large and important practice in London, and was among the few physicians who remained at his post during the Great Plague of 1665, when all the wealthier part of the population sought safety in flight. He was partly induced to remain because King Charles II specially requested him to take charge of his plague-stricken soldiers, who were brought to St. Thomas's, with the promise of a future reward which was never received. He was promised the place of physician to the king, but when a vacancy occurred some one else was appointed, and all that Dr. Wharton got was an augmentation to his coat-of-arms, for which he had to pay a fee of £10 to Heralds' College.

About Dr. Wharton I am able to quote a very special and interesting source of information. While in practice in London it was his custom to keep copies of his letters, or many of them, in a small note-book which has been preserved in the family since his time. This book has been placed in my hands by the kindness of the Right Hon. J. Wharton, M.P., its present possessor, with permission to make extracts from it.

The letters are various. Some of them are letters of advice to patients containing elaborate directions, and also prescriptions which are for the most part undecipherable. Some have reference to property, and are addressed to Dr. Wharton's agent at Old Park, Durham, an estate which the doctor bought (says Dr. Munk) in 1670. There are also some very interesting letters to his son Thomas at Cambridge, illustrating the University life of the period. Thomas, I may say, rewarded the anxious care and pains bestowed on him by his father, becoming in his turn a good physician and Fellow of the College. Of *his* son the same might be said.

But I think the most interesting letter in the volume,

and one of some historical importance, is a long one addressed to a lady who wanted to make her son a physician, and asked Dr. Wharton's advice. This advice, as you will see, is most discouraging, and might be summed up in the single word "Don't;" still more briefly in the single letter N (*negatur*), which he affixed to the question propounded at the head of his letter. The whole profession was going to rack and ruin;—better try anything rather than physic, and so forth. One seems to hear something of the same kind even in these days; probably similar laments were uttered in the last generation, and will be perhaps in generations yet to come; "so it always was, so it still shall be."

In spite of Dr. Wharton's gloomy forebodings, however, the state of trade, when once the ill effects of the Great Fire were got over, was most prosperous. Never, we are told, did wealth increase more rapidly in England than in those years; and no doubt all professions, that of physic included, got some share of the gold which was circulating. Dr. Wharton himself had no reason to complain, for he must have made a large fortune. Nevertheless it is easy to understand and enter into the mood of mind in which he composed the following letter:

LETTER ON PHYSIC AS A PROFESSION.

"TO MRS. CHURCH.

"An Medicina aliis studiis utilior? N.

"To your desired answer to this letter, dated May 9 instant, I shall returne you directly the same I did Mr. Chancelor Burnell to his letter dated November 4, 1672, wherein he desired my care and directions in the placing your son James, that he might have an insight of both chirurgery and anatomy, because, as he then writes, he intends your son for the profession of phisick. In answer to that very letter I wrote to this purpose, that at present I had a younge student with me, that had been 6 or 7 yeares at Oxford, of very good parts and naturall abilities, and

graduated and had taught my son these three yeares, now fitt for the University: that this younge student had acquired excellently in phisick, anatomy, surgery, botany, &c.: yet for all that I designed to dissuade him from the embracing phisick for his livelihood. Because now there was more apparent cause of its ruine and destruction than ever, by the swarmes of quackes, mountebanks, chymists, apothecaries, surgeons, and especially this new upturned brood of *virtuosi*, who are most likely by their Jesuitisme and policy, English books, experiments and receipts in phisick, to fill all families of note in England with their stuff, to overthrow all our old settled and approved practice of phisick, especially in London: which is now miserably impoverished by its burning and building and desertion of trade, that they have scarce money for their present subsistence, little for phisick and phisitians, and like to have less hereafter. Soe that every one out of necessity and good husbandry must become their owne phisitians and make their owne phisick. For all our ladies and gentlewomen keeps and stores up receipt-books and closetts of medicines fitted for most occasions. Besides, Phisick is too much overstocked with students graduated from the University. For I doe really believe it will easily appear that now there is in England 400 for one phisitian that was formerly: for that it is impossible but that their owne multitude must shortly ruine the profession without the plotts and envy of their enemies. He that begins the practice of phisick must resolve to be a perpetuall slave and servant to the meanest and basest all the dayes of his life, and if he neglect one instant and committ one error, or speak the least word amisse, his fame and name is lost for ever to him; and if his patient dye, hath killed him for certain, by the view of the people. Upon the Phisitian is imposed taxes, poles, great charges for houses and servants and entertainments, more in this age than ever formerly; —Coaches, Jacks and charges expected,—feastings. He is never called to any but miserable patients, where the apothecary or surgeon or chymist have been tampering soe that commonly the phisitian is brought only to take away the scandall of killing him to himself. The phisitian is made

that common jeare of the hunt, neglected, contemned, and reproached upon all occasions ; and, which is worst, they will one reproach and scandalize another for his ill practize, which is very certaine and evident to all practizers. For generally the phisitians are covetous, ignorant, impudent, and drunken, and for by that means he ruins himselfe and his profession. The universities have a great share in all these ill wayes by their first bringing up and binding their younge students. For they have lost the old and sound Aristotle's learning, and spend all their time in the new-fangled fopperies of Cartes, Gassendi, Boyle, Hobbs, Regius, &c. If the phisitian dine abroad, misse his houres usuall morning, noones, and nights, or rather all the whole day, with slavish attendance, he then certainly looses his patient, that brings the waters, and becomes reproached thereby : if sent for, and comes not presently, another comes, and he is neglected long after of the family and all their relations with scandall of neglect. If your phisitian venture his life upon attendance on his owne acquaintance in the dreadful time of the plague, in the conclusion they rewarde him with saying he did his duty, as they served me in this Cittie of London, where I got nothing soe much as the fugitive phisitians, but the King's gracious thanks for attending his soldiers in St. Thomas's Hospital all the time 1665. The phisitian old and crasy shall be called out of his bedd in London in winter nights to visit his patient, and with small reward ; but in summer or winter, when that patient comes to London and is sick he shall undeservedly call another phisitian to his attendance, and neglect the former that attended in the winter nights in the country. Then I considered in your letter how the Divinity had in it far greater hopes and opportunities of preferment, and a better settled way of perpetuity and continuance of supportance for younger students by being chaplains, vicars, curates through all England, to which they did quickly attaine ; but phisick was a tedious, long, and chargeable study, and 10 or 12 years at least after all time and charge of taking a Dr. of Phisick's degree, before any Dr. could hope to live by the benefitt of his profession. I then alsoe considered the comon and civill lawes, which farr exceede physick in certainty both of

honour and riches to the carefull and industrious students of them.

“ Mr. Church, D. Oct. 2-72, to my last letter returned that he still continued his intentions for your son for phisick, and thereby to endeavour his maintenance by country practice. I returned answer by letter dated Nov. 2, 1672, that what I had writt last to him was absolutely from my sense of the finall decay of the profession of phisick : but if he continued soe still resolved, I would afford your sonn the best entertainment I then could for dyet and lodging for 3 or 4 months, that he might have opportunity in London to see our constant practice in our Hospitalls—both of phisick and surgery, and be acquainted with the Apothecaries’ art and medecines, their gardens of phisicall plants, and with the most materiall books for practice of both. But now the improvement must wholly arise from himselfe, as he finds occasion by his owne practice, and thereupon carefully reading and extracting and constantly and exactly noting for his private use and memory what he shall read upon every disease, and thereby learne a readiness to comprehend and put any case to any clever phisitian to obtaine his counsell and experience upon the care of his case. Now this practice, if industriously followed, will really bring him into the right way and method of the practice of the art of phisick. And this way—I mean this way of study and improvement of himselfe by his owne industry I am now informing, suggesting, and insinuating upon your son’s capacity. For after he fully understands this course of study and practize mentioned, he must apply himselfe into the country and immediately put himselfe into dayly practice and exercise and curing poor patients. For reading alone is good for just nothing without the constant association of practice and bringing all he reades to the use and profit of the sick by his owne contrivement, judgement, industry, and constant diligence, ever altering and framing and suiting his medicins proper to the present case ; soe Practice without constant study, reading and examining what hath been done on like occasions by able, renowned and famous old practizers of phisick, will be successless ; but both judiciously joined together may produce an happy practice both to the phisitian

and patients, by God's constant blessing thereupon, which shall be heartily desired by

“Your reall friend and servant,

“TH. WHARTON.

“*May 15, 1673.*”

Dr. Wharton died at his house in Aldersgate Street 14th November, 1673, in his sixtieth year, and was buried in St. Michael's Bassishaw, in the City of London. The church is now about to be or actually is pulled down, and the bones of those buried there have already been removed to the new St. Pancras Cemetery. The tablet placed there to his memory will, I hope, be preserved.

His portrait, by Vandyck, is in the College of Physicians, having been presented by Dr. George Wharton, his grandson, in 1729. Through the kindness of Mr. Cobb, who has taken great pains in photographing the original, a copy adorns this volume.

A week after Dr. Wharton's death, November 21st, 1673, a Court of Governors was held to appoint his successor, and there were several candidates, some of them very eminent men. The choice of the Governors fell upon Dr. Richard Torlesse, and the selection was not, apparently, a happy one. For some reason which we do not clearly know, Torlesse was dismissed from his office in the year 1683 by the Royal Commissioners who then administered the Hospital.

About these Commissioners a word must be said.

Charles II, in pursuance of the policy which he originated, and which his successor continued, of making the House of Commons subservient to his will, was trying to get all the municipal corporations under his control, and revoked the charters of several of them by an exercise of arbitrary power. This fate overtook the City of London in 1683. The government of the City and the management of its property were handed over to the Royal Commissioners. Along with the City property were included the Royal Hospitals, St. Bartholomew's and St. Thomas's, of which the Lord Mayor and Corporation were the official Governors. The rule of the Commissioners in St. Thomas's lasted till the Revolution of 1688, but they do not seem to have left behind

them any record of their proceedings. At least none such is to be found in the Hospital Court books. Consequently we cannot say why Dr. Torlesse was ejected by them. Whether it was on political grounds or whether for some dereliction of duty it is impossible to say.

However, the physician appointed in place of Dr. Torlesse was an eminent man, Dr. William Briggs. I have no time to say much of him. He was born in 1642, the son of Augustine Briggs, Member for Norwich in several parliaments, and afterwards knighted. Another son was Professor at Gresham College and an eminent mathematician. Our physician was educated at Corpus Christi College, Cambridge, studying also at Montpellier and elsewhere on the Continent. He became Physician in Ordinary to King William III, and died September 4th, 1704.

Dr. Briggs was one of the first English physicians who devoted himself to diseases of the eye. He made minute researches on the anatomy of the organ, and also propounded new views on the theory of vision, which were partly adopted by Sir Isaac Newton, and I believe are still held to have been important in the history of the science of optics. He was altogether a credit to St. Thomas's, but unfortunately did not hold his post as physician very long, for, strange to say, Dr. Torlesse came back again. It happened in this wise : after the Revolution of 1688, when James II was expelled, something had to be done to counteract the effects of his unconstitutional proceedings. Accordingly an Act of Parliament was passed declaring all the acts of the Commissioners before mentioned and of other similar bodies illegal. Torlesse, therefore, claimed to be reinstated, as having been illegally dismissed from his post as physician. The Court of Aldermen, which had resumed the government of the Hospital, wanted to retain Dr. Briggs ; but the case being argued before Lord Chief Justice Holt in June, 1689, he decided, without considering the reasons for Dr. Torlesse's dismissal, that the act was illegal, that Dr. Briggs had no right to the place, and Torlesse must be reinstated.

So that whether there had or had not been good grounds for originally dismissing Torlesse, he now came back and

held office for fourteen years longer ; but his relations with the Governors do not seem to have been happy, and he was finally deprived of his office in 1703. On this occasion we do know why he was dismissed. It was a question of the money paid for the support of the King's soldiers admitted into the Hospital. Torlesse and his surgical colleague claimed that the profit accrued to them personally, and not to the Hospital ; at all events, they kept the money. Of this the Hospital Governors claimed restitution, and ultimately their right prevailed, so that Torlesse not only lost his place, but was condemned to reimburse a large sum of money ; in consequence of which he fell, it is said, into difficulties, and died in great poverty.

But so far as St. Thomas's was concerned, the Hospital was a gainer by Torlesse's dismissal, for the physician elected in his place was one of our great glories—Dr. Richard Mead.

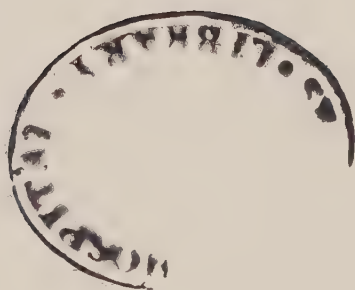
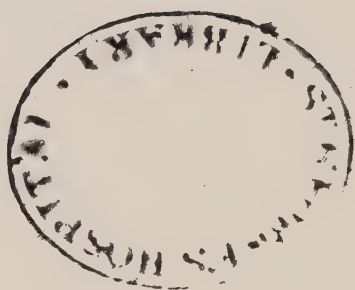
The condition of the medical side of the Hospital at the close of the seventeenth century had evidently not been satisfactory. With Dr. Torlesse as the only physician for almost the whole period of thirty years, little reputation could accrue to the Hospital, and I can find no clear evidence of there being any medical pupils. The surgical staff, on the other hand, had a high reputation.

Ferne, Molins, and other surgeons of great eminence were on the staff even before the advent of Cheselden ; but from the election of Mead we find the medical reputation of St. Thomas's growing till it rivalled or equalled its surgical fame.

Dr. Richard Mead, the most eminent physician in the age of Queen Anne and the first two Georges, was born at Stepney, 11th August, 1673, the son of the Rev. Matthew Mead, a divine who at the Restoration of Charles II was in the enjoyment of a City benefice, but was driven out by the Act of Uniformity, as he belonged to the Puritan party, and refused to conform to the altered rule in the Church. More fortunate than many of his Nonconformist brethren, Matthew Mead was a man of good property, and when he settled at Stepney in charge of a Nonconformist congregation was able to give his son a good education. The



RICHARD MEAD, M.D.



English universities being closed to him, the youth was sent to Holland, where he first studied classics and philosophy at Utrecht, and afterwards, for three years, medicine at the celebrated school of Leyden. Thus Mead's exclusion from the English universities was favorable rather than otherwise to his professional education. After completing his studies he travelled in Italy in comfortable circumstances, and acquired a taste for and knowledge of the fine arts which he never lost. He graduated at Padua 16th August, 1695, and returning to England, settled in practice at Stepney, without at first belonging to the College of Physicians. In 1702 he published his first medical work, on 'A Mechanical Account of Poisons.' By this he gained much reputation, and was in the next year elected a Fellow of the Royal Society.

His scientific reputation doubtless contributed to his election at St. Thomas's in the same year. He was also chosen as Reader in Anatomy to the College of Surgeons.

After his election at St. Thomas's, Mead practised in the City, first in Crutched Friars, afterwards in Austin Friars. On the death in 1714 of Radcliffe, who had been the most popular physician of Queen Anne's time, Mead removed to his house in Bloomsbury Square, then a centre of fashion, and resigned his post at the Hospital. Later, when at the height of his reputation and popularity, he occupied the fine old mansion in Great Ormond Street which in our time has become the Hospital for Sick Children, and where some vestiges of ancient grandeur may still be traced. On the accession of George II he was appointed Physician to the King. He died 16th February, 1754, in his eighty-first year.

Mead's character was so many-sided, his life was so full of prosperity and magnificence, his medical reputation so brilliant, and he was so emphatically the representative physician of his age, that it is difficult to do him justice in the time at my disposal; but there are several good accounts of him to which you can refer, such as Dr. Norman Moore's memoir in the 'Dictionary of National Biography,' and, as perhaps the most readable, one in the little work called 'Lives of British Physicians.' His life being therefore so well written already, I shall confine myself to a few points.

First, Mead's connection with St. Thomas's Hospital. He was Physician from 1703 to 1714; and numerous references in his writings make it evident that he did his duty thoroughly, and investigated his cases with great care. He made valuable clinical observations, though not any great discovery in medicine, and introduced one valuable practical method which is still in use.

He observed that in cases of ascites, when the fluid was removed by tapping, the patients sometimes suffered from fatal syncope. He concluded that this must be due to the sudden loss of pressure, and accordingly ordered a strong bandage to be placed around the abdomen, and gradually tightened as the fluid was withdrawn. The operation, it is said, which was before often attended by fatal accidents, became safe. This is of course the method we now use every day in the wards. Let us call it Mead's method.

Also he was the first to show that the mortality from measles, which is said to have been at that time very great, was due to pneumonia, and by treatment based on this principle he greatly reduced the mortality. We might quote other instances of sound clinical observation. Mead also attached great importance to post-mortem examinations, though the information conveyed by them in those days must often have been ambiguous. In 1714, when Radcliffe died, Mead's increased position and residence far from the Hospital compelled him to give up his appointment at St. Thomas's. The Governors received his resignation with many expressions of regret, and at once presented him with a Governor's staff—an honour at that time seldom conferred upon retiring physicians or surgeons, if indeed it was ever before.

Dr. Mead showed his interest in the Hospital by subsequently attending the Courts as a Governor. It was also largely owing to him that Guy's Hospital was founded, for he persuaded the bookseller Guy, who was also a benefactor of St. Thomas's, to devote his large fortune to that object. Mead was a Governor of St. Bartholomew's, and I think also of Guy's Hospital, and among the first supporters of the Foundling Hospital.

Let us now consider Mead's relations to society. Socially

he occupied a position such as no English physician ever held before or since, and such as probably none will ever hold again. Physicians in his time were rarer birds than now, they wore finer plumage and lived in grander nests,—at least judged by the standard of the day. A great physician was a public character in a sense in which no physician is now, or, indeed, could be; especially when professional etiquette expects that the good doctor should avoid rather than court publicity. Mead, however, even among physicians, stood alone—the one great man of the day. His social influence was shown in the case of Dr. Freind. This eminent physician, who was intimate with Mead though of the opposite party, being a Tory while Mead was a Whig, was committed to the Tower for an imprudent speech in Parliament. While he was in durance Mead took charge of his practice, visited him, and made great efforts for his release, but in vain. At length it happened that Sir Robert Walpole, the minister who was responsible for Freind's imprisonment, was ill, and sent for Mead. This was the physician's opportunity. He attended the minister, but positively refused to write a prescription for him till Walpole had signed an order to liberate Dr. Freind from the Tower. Has the like of this ever happened since? Has there been any physician of whom such a story would be even credible?

Mead's private practice was probably more brilliant and lucrative, in proportion to the value of money at the time, than that of any other physician we know of. It was an age in which wealth was rapidly increasing throughout the country. There were two classes of very remunerative patients, the Court and aristocracy at the west end of the town, the City merchants and bankers (who then lived in the City) at the other. Conveniently situated between the two, Mead reaped a large harvest from both classes.

A third class of society, distinct from either, the literary world—the wits and scholars—were not less devoted to Mead. Among them he had his closest friends, his most faithful patients, his warmest admirers. Pope has in one line immortalised our two great St. Thomas's names:

“I'll do what Mead and Cheselden advise.”

Young (the author of "Night Thoughts") has—

"Alive by miracle! or what is one, by Mead."

Mead must have made a great deal of money, and had the spending of it in his lifetime. In expenditure he was magnificent; no other word will suit. No one seems to have better exemplified a quality which the modern student wonders to find enumerated by Aristotle among the virtues, *μεγαλοπρεπεία*, the art of great expenditure; "a mean," says Aristotle, "between vulgar ostentation on the one hand and niggardliness on the other." Modern language has no other name for what, whether a virtue or not, must certainly be a difficult art. But let us be comforted; few of us are likely to know how difficult it is.

Look, however, at Mead's portrait, and you will understand something of the art of magnificence. How grand, dignified, sublime is everything about him! Compare a modern physician in evening dress—who could be found to sustain the comparison?

Without exaggeration, Mead's way of spending was charitable, generous, munificent, showing an intelligent appreciation of the higher ends of expenditure, though we can quite imagine that his heirs may have wished he had spent a little less. He was hospitable to all classes, from the highest downwards, perhaps preferring those who were not likely to ask him again. His mansion in Great Ormond Street was a social link between the Court and the City, and there every notable foreign visitor found himself in the best society of England. Mead filled with great dignity the office, then important, though now almost obsolete, of a literary patron. He assisted the publication of many works of the highest value in letters and learning. The number of books dedicated to him is some indication of his liberality, for in those days a dedication generally implied a handsome subscription or donation from the person thus honoured to the dedicator. Among them were works of great importance, such as the *Opus Majus* of Roger Bacon, published for the first time under the editorial care of Jebb, to which it is probable that Mead contributed material support.

He collected a magnificent library, a gallery of sculpture,

and museums of coins and antiquities which were freely open to all who could appreciate them.

Something must be said about Mead's own writings. He wrote several books, copies of most of which are on the table to-night. You will ask, what is their scientific value? To answer this we must try and define Mead's place in medical history. He belonged in the main to what is called the Iatro-mechanical or Iatro-mathematic School, though, as he borrowed from other schools also, he might almost be called an eclectic. The great object of his school was to explain disease and also its treatment on scientific principles. Mead kept himself well up in the science of the day, and applied it to elucidate medical problems. His first book was 'A Mechanical Account of Poisons,' in which he tried to explain the action of poisons on the principles of the mechanical philosophy of Bellini. In another work, '*De Imperio Solis et Lunæ*' ('On the Power of the Sun and Moon in Disease'), he showed that he was led away by the glamour of Newton's great discoveries, and thought Astronomy was going to explain everything. We can understand what books of this kind are like, because much of our modern medical literature consists of scientific explanations of morbid phenomena. Such literature is popular and edifying so long as its scientific basis remains stable. But when science shifts its ground, as it will do, and the former so-called facts are facts no longer, then the explanations founded on them become obsolete, and the books are out of date. Hence we find no great satisfaction in these writings of Mead's, though it should be said he writes like a strong man; his thought is keen and logical, his style lucid. In later years he brought out some 'Medical Observations,' drawn from his own experience, which approach more the clinical method of Sydenham, and show that he did not carry his mathematics into the sick room. Mead's most popular work was his 'Discourse on Pestilential Contagion,' written for a special occasion in 1721, when a terrible outbreak of that disease in the south of France spread a panic through Europe, and not least in England. To allay the public alarm the Secretary of State, Mr. Craggs, applied to Mead for advice as to how the plague was to be

kept out. The reply was the pamphlet above referred to, which went through several editions in a short time. Mead's scheme of prevention was an excessively rigorous system of quarantine, such as could hardly have been enforced. It was not, of course, the writer's fault that he had no practical knowledge of the disease, but independently of this, one cannot find any originality in the 'Discourse on the Plague,' as it was afterwards entitled. This pamphlet was in English, but most of Mead's works were first published in Latin, though afterwards translated into the vernacular.

Another subject which greatly interested Mead was the antiquarian and historical side of medicine. He wrote a learned and curious dissertation on the diseases mentioned in the Bible, '*Medica Sacra*;' and in his Harveian Oration discussed '*Medals struck in Honour of Ancient Physicians*.' In fact, it would be difficult to say in what aspect or department of medicine he was not interested.

Such was Richard Mead, the most eminent physician in the annals of St. Thomas's, and one who, though no great original genius, will always be a name in the history of English medicine. Why do we speak so highly of him?

I do not ask you to admire Mead because he was the most popular physician of the day, or because he made the largest income. Wealth and popularity are excellent things, but we ask in the end, what use did a man make of such splendid gifts of fortune? and on what did his popularity rest?

What kind of physician was Mead? It is very difficult to judge what practice was like in past times, but we must conclude that Mead was a good practical physician. He possessed every kind of training and knowledge that Europe could give him. He was evidently a wise and sagacious adviser. His character commanded the respect and secured the obedience of his patients. He was honest and fearless, with great confidence in himself, but incapable of deluding his patients with false pretences. So far as one can judge, his treatment was very successful.

Finally we ask, what kind of *man* was Mead really, apart from his position, his magnificence, his learning? First, no doubt he was a genuine, upright, honorable man, faith-

ful to his friends, affectionate to his family, benevolent to all in need. Nothing mean, false, ungenerous, was ever laid to his charge. His motto was *Non sibi, sed toti* ("Not for yourself, but for all"), and he lived up to it.

Now if we want a little shadow to bring out these high lights and make our picture less monotonous, we can find some, but it is of no very damaging kind. Mead had a temper; he was proud, and also somewhat choleric. Like many, or perhaps most men noted for munificence, he liked to be in a position of superiority. He had some quarrels. One with Dr. Woodward, a Professor of Gresham College and notoriously a man of strife, is said to have ended in a duel, but the accounts of it differ in several particulars, and I will leave you to read of it elsewhere. Another story illustrates Mead's character better. Among contemporary physicians a very favourite one was Dr. Cheyne, author of many popular medical works, which being not only written in English, but purposely adapted to attract the attention of the lay public, gave him then, as they would now, a doubtful reputation in his own profession. One of Mead's patients, a clergyman, whom, as his custom was, he attended gratuitously, had been reading Dr. Cheyne's works, and ventured to quote something from them in criticism of Mead's opinion. You may imagine the indignation of the magnificent Mead on having Dr. Cheyne thrown in his teeth. He forgot himself so far as to use about Dr. Cheyne and all his works language stronger than clerical ears are accustomed to listen to, and even departed from his usual habits in accepting a fee from the reverend patient (though he afterwards returned him half of it).

This was his weak side; it were well if nothing worse could ever be said of any one.

Mead's features are known to us by several portraits. The fine engraving which Mr. Cobb has been so good as to photograph for us is one of the best. The marble bust by Weeks in our hall is modelled from the original in the College of Physicians by Roubiliac, and from other likenesses.

With this great name we close our account of St. Thomas's physicians for the present.

OPERATIVE TREATMENT OF APPENDICITIS.

By H. H. CLUTTON,

SURGEON TO THE HOSPITAL.

IN collecting cases in which an operation has been done during the quiescent stage of appendicitis one necessarily comes across those in which an attempt has had to be made to save life in the acute stage. It has therefore seemed to me interesting to place them side by side in separate tables, so that some comparison may be drawn between the two sets of cases. The treatment, it is true, is generally quite distinct in the one from the other, but the disease appears to be of the same nature. If the recurrent cases which require operation in the quiescent stage were all simply instances of catarrhal appendicitis, and the perforative class were always followed by general peritonitis, there would be little difficulty in explaining the pathological difference between the two sets of cases, for one would suppose that the latter were caused by organisms of greater virulence. This simple explanation, however, is not sufficient, for we again and again find in operating upon the recurrent cases that perforation of appendix has taken place, and that the apparent difference between it and the fulminating class which produces general peritonitis is one only of degree.

Peritonitis has indeed occurred, but has been confined to a small area of this important serous membrane.

Again, in some cases from the severity of the symptoms and the amount of local swelling the diagnosis has been made of purulent appendicitis with possible ulceration and perforation, and yet at the operation the appendix has been found free from pus and only loosely adherent to surrounding tissue—a case, therefore, of catarrhal appendicitis.

TABLE I.—*Operations in the acute stage.*

No.	Year.	Sex and age.	Previous attacks.	Present attack.	Operation.	Result.
1	1894 Private	M., 45	None	Feb. 2nd, 1894.—Acute pain in right iliac fossa; general swelling; vomiting lasting two days. 7th.—rigor; temp. 104°.	Feb. 7th, 1894, 4 p.m.—Incision on outer side of abdomen; found hard mass in right iliac fossa; no pus; drainage-tube.	Recovery; no attack since.
2	Hospital	M., 8	None	July 14th, 1894.—Acute pain and vomiting. 20th.—Admitted with distension of abdomen and collapse; temp. 105°.	July 20th, 1894, 2.45 p.m.—Incision in right semilunar line; found stinking pus; washed out and drained.	Died July 21st. P.M.—Gangrenous appendix and general adhesive peritonitis.
3	1895 Hospital	M., 12	Several	May 24th, 1895.—Acute pain and vomiting. 31st.—Admitted with collapse and general peritonitis; continuous vomiting and distension of abdomen.	May 31st, 1895, 4.30 p.m.—Median incision size of one finger; found stinking pus in general peritoneal cavity; two glass tubes inserted; washed out without anaesthetic.	Died same evening. P.M.—Appendix with faecal concretions and full of pus; purulent peritonitis.
4	Hospital	F., 8	No history obtained	Sept. 21st, 1895.—Acute pain and vomiting. 27th.—Admitted with large abscess in right iliac fossa stretching to mid-line.	Sept. 27th, 1895, 3 p.m.—Incision through right rectus; found stinking pus and faecal concretions; two drains inserted; peritoneal cavity not opened.	Recovery. Feb., 1897.—No attack since; ventral hernia through cicatrix.
5	Hospital	M., 18	Ditto	Oct. 17th, 1895.—Pain and vomiting. 26th.—Admitted with general peritonitis and a large abscess in right flank.	Oct. 26th, 1895, 9.30 p.m.—Incision in right semilunar line into peritoneal cavity; pus in pelvis; with finger in abdomen cut down in right lumbar region on large stinking abscess.	Died Oct. 27th, 11.45 a.m. General purulent peritonitis and subdiaphragmatic abscess.

6	Hospital	F., 38	None	Ill 6 weeks at home with fever, vomiting, and pain. Nov. 8th.—Admitted with tense swelling in right iliac fossa and high temperature.	Nov. 8th, 1895.—Incision in right semilunar line; found stinking pus; drained; peritoneal cavity not opened.	Recovery; no attack since.
7	Hospital	M., 13	No history obtained	Ill for 3 weeks with abdominal pain and fever. Nov. 15th.—Admitted with great distension of abdomen; temp. 103°; large abscess in right iliac fossa to last rib.	Nov. 16th, 1895.—Incision in right lumbar region just below last rib; found stinking pus and slough shape and size of appendix; drained; large concretion washed out on the 29th.	Ditto.
8	Hospital	F., 52	1st attack July 17th, 1895; large abscess opened in right iliac fossa	2nd attack Nov. 8th, 1895. Admitted Nov. 20th with pain, sickness, and no action of bowels for 4 days.	Nov. 30th, 1895.—Small median incision, afterwards closed, as there was no indication where to incise for pus; faecal abscess in old scar over appendix spontaneously opened November 27th.	Recovery. Feb., 1897.—Has a ventral hernia; refused further treatment.
9	Hospital	F., 19	1st attack Feb., 1895	2nd attack; ill for 3 weeks at home. Admitted Nov. 22nd, 1895, with large hard swelling in right iliac fossa; no soft spot to be felt; no fluid in peritoneal cavity.	Nov. 23rd, 1895, 3.30 p.m.—Small median incision, afterwards closed for examination of swelling; second incision close to anterior superior spine into swelling, but no pus found; gauze plug, which was changed every day; it smelt slightly, but no pus came away.	Recovery. Re-admitted Feb., 1896, for excision of appendix. See Table II, No. 17.
10	1896 Private	M., 49	None	Jan. 6th, 1896.—For 1 week has had abdominal pain, high temperature, and occasional sickness; large swelling in right iliac fossa.	Jan. 7th, 1896.—Incision over right iliac fossa, separating muscles without division; peritoneum found free and not adherent; bloody fluid at outer angle smelt; gauze plug introduced at this spot and changed every day; gauze continued to be offensive for a week, but scarcely any pus even at the end.	Recovery. Mar., 1897.—No attack since, but there is a slight tendency to hernia.
11	Hospital	M., 22	1st attack June, 1887	2nd attack. Admitted Feb. 18th, 1896. Had been ill 7 days with pain and swelling in right iliac fossa. 23rd.—Swelling increasing.	Feb. 23rd, 1896.—Incision in right semilunar line; peritoneum opened; no adhesion to anterior wall; wound closed; subsequently discharged through wound and healed again.	Recovered. Refused operation for removal of appendix.

No.	Year.	Sex and age.	Previous attacks.	Present attack.	Operation.	Result.
12	1896 Hospital	F., 52	None	Admitted Feb. 27th, 1896. Had been ill 18 days with acute pain, vomiting, swelling in right iliac fossa, and high temperature. 28th. —An elongated hard swelling from beneath liver to below umbilicus, whilst that in iliac fossa had diminished.	Feb. 28th, 1896, 6 p.m.—Incised swelling just below liver; stinking pus; subdiaphragmatic abscess; drainage-tubes.	Recovered after prolonged suppuration and several operations; left the hospital on June 22nd.
13	Hospital	M., 60	Has had 4 attacks during the last 12 months	Admitted Feb. 26th, 1896. Has been ill for 5 days with acute pain, vomiting; no local swelling; peritonitis and obstruction.	Feb. 27th, 1896.—Laparotomy for obstruction; kinked bowel and large abscess, in centre of which was found sloughing appendix; general peritonitis; drained.	Feb. 28th.—Died 8 a.m. P.M.—Septic peritonitis.
14	Hospital	M., 41	None	Jan. 22nd, 1896.—Ill about 3 weeks with pain and swelling in abdomen, which has disappeared and returned again and again; high temperature. Mar. 4th, 1896.—Fluctuation in right iliac fossa.	Mar. 4th, 1896.—Incision to outer side; pus from beneath cæcum.	Recovery. Mar., 1897.—No attack since.
15	Hospital	F., 21	No history obtained	Oct. 23rd, 1896.—Ill 9 days with pain, tenderness, and fever; temperature on admission 105°; fluctuation in right iliac fossa.	Oct. 23rd, 1896, 4 p.m.—Incision over swelling; stinking pus; two drainage-tubes.	Nov. 20th.—Has been quite well till a few days ago; now rigid abdomen; opened; found pelvis full of pus. Died 8 p.m. P.M.—Peritonitis.
16	1897 Hospital	M., 20	Ditto	Jan. 22nd, 1897.—Has been ill for 2 weeks, but only in	Jan. 22nd, 1897.—Incision in right iliac fossa without opening peritoneum; found pus and	Recovery. Mar. 31st, 1898.—No at-

17	Hospital	M., 36	Ditto	<p>acute pain and collapse the morning of the 22nd; large ill-defined swelling found in right iliac fossa and general peritonitis.</p> <p>May 4th, 1897.—6 weeks pain, slight diarrhoea, and occasional sickness; 8 days ago increased pain and swelling; temp. 102°. Large abscess found on admission in right iliac fossa.</p>	<p>May 5th, 1897.—Incision over swelling; stinking pus; drainage-tube.</p>	<p>Recovery. Feb., 1898.—No attack since.</p>
18	1898 Hospital	M., 17	None	<p>Mar. 30th, 1898.—18 days pain and swelling; temperature high; no general distension.</p>	<p>Apr. 1st, 1898.—Incision close to Poupart's ligament; stinking pus found beneath cæcum; drainage-tube.</p>	<p>Recovery; refused operation for removal of appendix.</p>
19	Private	M., 21	None	<p>Apr. 24th, 1898.—Began 7 days before with vomiting and diarrhoea; 2 days ago abdomen rigid and distended; temperature normal; pulse 120; no certain indication of local swelling.</p>	<p>Apr. 24th, 1898.—Median incision; general adhesive peritonitis; with finger within the abdomen found inflammatory mass in right iliac fossa; incision made towards Poupart's ligament; stinking pus and faecal concretions evacuated; drainage-tube.</p>	<p>Recovery; subsequent removal of appendix. See Table II, Case 44.</p>
20	Hospital	M., 27	None	<p>May 13th, 1898.—Admitted with 4 days' history of sickness and pain; general peritonitis without any definite swelling in right iliac fossa, but uniform distension of abdomen.</p>	<p>May 17th.—Median incision; coils of intestine all matted together; a little turbid fluid from pelvis; could not find any localised swelling in iliac fossa.</p>	<p>Recovery after 3 weeks' acute illness; pulse from 120—160; temp. normal or subnormal; much improvement always following free purgation. See Table II, Case 46.</p>
21	Hospital	M., 21	Had had previous attacks, but not severe	<p>May 31st, 1898.—Admitted with 6 days' history of vomiting and pain, preceded by diarrhoea; general peritonitis same as No. 20.</p>	<p>June 1st.—Incision over right iliac fossa as under anæsthetic; some localised swelling could be felt; stinking pus evacuated, and a perforated appendix removed.</p>	<p>Died 3 hours after operation. P.M.—General peritonitis and another collection of pus on opposite side of abdomen.</p>

The cases of appendicitis which have been seen in the acute stage have been far more numerous than would at first sight appear on consideration of this table. For only those were operated on in the early stage, which seemed in danger of producing peritonitis or of opening through the skin; and it is those which were submitted to operation which are here considered. The others which were thought likely to recover from the acute stage would be treated by the more radical method of removal of the appendix in the quiescent stage of the disease at a later period.

In every instance my colleague, Dr. Sharkey, has most carefully considered whether it was likely the patient would "tide over" the acute stage, and if there seemed to him to be a doubt on this point I was asked to see the case. Consequently all the doubtful cases came under my observation during the acute stage, and the milder cases were transferred to my ward at a later period during the quiescent stage for the radical operation of removal of the appendix. Of the acute cases operated on by me some had already an acute general peritonitis, and were treated by opening the abdomen on the right side or in the middle line below the umbilicus, thorough evacuation of the purulent contents, flushing with sterile water, and the introduction of a drainage-tube, generally of glass or rubber. But the appendix itself was not in most cases sought for. The patient was, as a rule, in too bad a condition for such a measure, even if it had not been thought that such a disturbance of the matted coils of intestine would but add to the mischief. Success was not often attained, as will be seen in the table of cases. In another section of these acute cases the temperature had continued high, and the local swelling had continued to increase in size instead of diminishing, leading to the impression that a collection of pus had formed. But there was no evidence of general peritonitis.

Sometimes actual fluctuation it was thought could be felt, or in others the swelling was so large that one felt certain that adhesions had shut off the general peritoneal cavity, and that no harm would come from an attempt to evacuate the pus that might be present. An incision, therefore, was made over the most prominent part of the swelling and a

drainage-tube introduced. In some instances a sloughing appendix was washed out by gentle irrigation, but no prolonged search was made for fear of disturbing adhesions. Occasionally the effort to reach the pus was fruitless, because it was thought wiser to desist for fear of causing general peritonitis.

In these cases the pus was probably beneath the cæcum, for in a few days it generally appeared in the wound, which had been left open.

The *mortality* in this table (No. 1) is necessarily very high. Six cases out of the twenty-one recorded died of general septic peritonitis, which, with the exception of No. 15, was present at the time of operation. The proportion of deaths would have been still higher if the cases of localised suppuration had been excluded. When it is borne in mind how often localised suppuration in the abdominal cavity is accompanied by more or less general peritonitis it will, I think, be conceded that the distinction cannot always be made. It has therefore been thought best to keep them all together in one table.

It will be seen from the foregoing remarks that every case of appendicitis comes under the surgeon's treatment in one stage or the other; for if it is thought best to play a waiting game during the acute stage, the patient should not now-a-days be allowed to run the risk of a second attack, but should be submitted to the operation of removal of the appendix as soon as the acute stage has passed. And this has been the advice invariably given during the last two years.

TABLE II.—Operations in the quiescent stage.

No.	Year.	Sex and age.	Previous attacks.	Present attack.	Operation.	Condition of appendix.	Result.
1	1894. Hospital	M., 17	None.	1st attack commenced Dec. 28th, 1893, with fever and swelling; a definite tumour remains, though the temperature is now normal.	Jan. 24th, 1894.—Oblique incision in right semilunar line; appendix found beneath ileum.	Catarrhal.	Healed by first intention.
2	Hospital	M., 28	1st attack Mar. 15th, 1894; vomiting and fever. 2nd attack April 16th, 1894.	3rd attack May 21st, 1894; slight swelling still to be felt.	May 31st, 1894.—Incision to outer side of semilunar line; appendix tucked up under cæcum and loosely adherent.	Catarrhal; swollen and long.	Healed by first intention. July, 1898.—Slight bulging of scar.
3	Private	M., 31	1st attack Nov., 1893. Has had six severe and three minor attacks since.	11th attack June 26th, 1894; a definite tumour remains; weighs 6 stone; normal weight 8½ stone.	July 9th, 1894.—Incision in semilunar line; appendix found tucked under cæcum and to its outer side; adherent all the way; removed 5 inches.	Bulbous end, which was perforated and contained pus.	July 16th.—Abscess to outer side of wound; opened, drained, and healed quickly; gained 3 stone in weight by Nov., 1894.
4	Private	M., 28	1st attack Dec., 1887; in bed 6 to 8 weeks. 2nd attack July, 1892; 6 weeks. 3rd attack Nov., 1893; 3 weeks. 4th attack Feb., 1894; 1 week. 5th attack May, 1894; 6 days. Unable to work.	6th attack June 30th, 1894; in bed 4 days.	July 16th, 1894.—Very stout man; incision in right semilunar line; removed a much shortened appendix.	Atrophied to within 1 inch of its base, which contained pus.	Aug. 4th.—Suture abscess; healed quickly. 1898.—Has been at work ever since; no hernia.
5	Hospital	M., 31	1st attack Oct., 1893. 2nd attack Feb., 1894.	3rd attack Sept. 23rd, 1894; a definite tumour remains.	Oct. 10th, 1894.—Incision in right semilunar line; appendix found underneath cæcum in an abscess cavity; glass drain inserted.	Perforated and full of offensive pus.	Recovery with slight protrusion of scar; wears a belt; gained 2 stone in weight.

7	Hospital	F., 35	1st attack Feb., 1892.	2nd attack Dec., 1894.	March 6th, 1895. — MacBurney's incision, see p. 45; appendix found free from adhesions and not removed.	Normal.	Healed by first intention.
8	Private	M., 16	None.	1st attack 6 weeks ago; had retention of urine for 3 days; convalescent for 2 weeks; definite tumour above Poupart's ligament.	March 18th, 1895. — MacBurney's incision; appendix found fixed to omentum near Poupart's ligament and over iliac vessels.	Catarrhal; very long appendix with bulbous extremity; ? stricture, but not looked for.	Healed by first intention.
9	Hospital	M., 27	None.	1st attack Feb. 19th, 1895; sudden and acute; definite small tumour remains.	April 13th, 1895. — MacBurney's incision; appendix found buried in omentum; removed on a level with cæcum.	Atrophied and very short; base swollen and large.	Healed by first intention; abscess in cæcatrix 14 days after operation.
10	Hospital	M., 36	1st attack Oct., 1893, in India; 5 attacks since; unable to work.	6th attack May, 1895; small tender tumour in right iliac fossa, nearer to Poupart's ligament than usual.	May 29th, 1895. — MacBurney's incision; found appendix very long, and its tip adherent to anterior abdominal wall, close to Poupart's ligament.	Catarrhal, with faecal concretions.	Healed by first intention; returned to India Nov., 1895, quite well.
11	Hospital	M., 24	1st attack 1894; last three this year; in bed about 10 days each time.	5th attack June, 1895; pain and tenderness remain in right iliac fossa, but no definite tumour.	July 3rd, 1895. — MacBurney's incision; appendix swollen and vascular, with many adhesions.	Catarrhal.	Healed by first intention.
12	Hospital	M., 26	1st attack Aug., 1895; constant pain since.	2nd attack Oct., 1895; great tenderness remains.	Oct. 30th, 1895. — Incision through sheath of rectus; found congested cæcum and small intestine; appendix bent on itself and adherent beneath the ileum.	Infective; very long appendix perforated near the base.	Nov. 3rd. — Death. P.M. — Septic peritonitis; pus round stump, which was, however, quite sound.

No.	Year.	Sex and age.	Previous attacks.	Present attack.	Operation.	Condition of appendix.	Result.
13	Private	F., 20	1st attack July, 1895; temp. 103°. Two attacks since.	4th attack Oct. 30th, 1895; definite tumour remains.	Nov. 7th, 1895.—MacBurney's incision; long appendix free from any adhesion.	Catarrhal.	Healed by first intention. Abscess of scar opened on Nov. 20th. April, 1898.—Has had two children since operation; no hernia.
14	Hospital	M., 33	1st attack May, 1895. Four attacks since.	6th attack Nov., 1895; tender on pressure, but no tumour felt.	Dec. 4th, 1895.—MacBurney's incision; very long appendix free from adhesions, but "kinked" in the middle; no pus.	Catarrhal.	Superficial suture suppuration.
15	Private 1896.	M., 28	1st attack Jan., 1895. 2nd attack July, 1895.	3rd attack Dec. 25th, 1895; tenderness remains, with a small tumour.	Jan. 25th, 1896.—MacBurney's incision; appendix found in mass of adhesions to cæcum, and so bent upon itself that apex and base were close together amongst coils of small intestines.	Catarrhal.	Wound suppurated, and buried silk sutures had to be subsequently removed.
16	Hospital	M., 26	1st attack Jan., 1892, and two during the last 18 months.	4th attack Jan., 1896.	Feb. 12th, 1896.—MacBurney's incision; appendix found bent upon itself, firmly adherent to ileum, with tip attached to mesentery.	3 inches long, and dilated into a pouch at the apex containing pus; stricture on the proximal side of pouch, without a lumen.	Healed by first intention.
17	Hospital	F., 19	1st attack Feb., 1895.	2nd attack Nov., 1895 (see Table I, No. 9); large fluctuating swelling in right iliac fossa, opened on ad-	Feb. 12th, 1896.—MacBurney's incision; found appendix buried to outer side of cæcum, adherent all the	Purulent; stricture at base, with absence of lumen at point of ulceration.	Slight suppuration. March 11th.—Healed.

18	Hospital	F., 30	1st attack April, 1895; attacks every 3 months since.	mission, drained with gauze plugs; healed. Readmitted Feb., 1896, on account of pain.	May 27th, 1896.—MacBurrey's incision; no adhesions.	Catarrhal; two concretions and constriction at base	Healed by first intention.
19	Private	F., 30	1st attack May, 1894, and eight attacks since.	Never quite comfortable between attacks.	May 29th, 1896.—MacBurrey's incision; no adhesions.	Catarrhal; faecal mass inside; no stricture or bulging of wall.	Healed by first intention.
20	Private	F., 39	1st attack July, 1894. 2nd attack Aug., 1895.	3rd attack May, 1896.	June 19th, 1896.—MacBurrey's incision; no adhesions.	Catarrhal.	Healed by first intention.
21	Hospital	M., 33	None.	1st attack June 10th, 1896; a definite tumour remains.	July 8th, 1896.—MacBurrey's incision; found base of appendix just behind anterior superior spine adherent to caecum; distal part indistinguishable from mass of granulation tissue, which led to a hole in the abdominal wall.	Purulent; lumen had disappeared at the base.	Healed by first intention.
22	Hospital	M., 32	None.	1st attack June 13th, 1896; definite hard and tender tumour remains.	July 15th, 1896.—MacBurrey's incision; found appendix curled on inner side of caecum, with base glued to it.	Purulent and infective; perforated at base.	Healed by first intention.
23	Hospital	M., 27	1st attack Feb., 1896.	2nd attack Aug., 1896; tumour indistinctly felt.	Sept. 30th, 1896.—MacBurrey's incision; appendix adherent to brim of pelvis, large and very difficult to remove.	Catarrhal; contained three very large hard calculi.	Temp. 99–100° F. Pus beneath scar Oct. 6th. Healed Oct. 22nd.
24	Private	M., 32	1st attack Nov., 1890; temp. 105°. 2nd attack Nov., 1892.	3rd attack June, 1896; very mild attack, but a small hard lump can still be felt.	Oct. 5th, 1896.—MacBurrey's incision; appendix adherent beneath caecum; pus escaped in separating adhesions.	Purulent; base very hard and large, and without a lumen.	Healed by first intention. Oct. 22nd.—Thrombosis of left femoral.

Case	Year.	Sex and age.	Previous attacks.	Present attack.	Operation.	Condition of appendix.	Result.
25	Private	M., 35	1st attack March, 1895. 2nd attack Nov., 1895. 3rd attack Feb., 1896. 4th attack March, 1896. 5th attack May, 1896. 6th attack Aug., 1896. All were mild attacks.	7th attack Oct. 9th, 1896; in bed 3 weeks; small tumour remains.	Nov. 14th, 1896.—MacBurney's incision; appendix so fixed to cæcum that it had to be cut out.	Purulent; distal end full of pus; base obstructed.	Healed by first intention.
26	Hospital	M., 22	1st attack Nov., 1894, and three attacks during the last 3 months.	5th attack Nov., 1896; small tumour remains.	Dec. 9th, 1896.—MacBurney's incision; appendix found turned up beneath colon, making an S curve, very thick and loosely adherent all the way.	Catarrhal; exceptionally large and thick, measured 6 inches after removal; full of mucus, but no bulging or constriction.	Healed by first intention.
27	1897	M., 12	None.	1st attack Jan. 4th, 1897; temp. 104°; definite tumour remains, extending towards loin.	Jan. 20th, 1897.—MacBurney's incision; appendix adherent to outer side of colon in a small collection of pus.	Purulent and perforated.	Healed by first intention, but a small sinus formed; finally healed Feb. 16th.
28	Hospital	M., 24	None.	1st attack Feb. 18th, 1897; temp. 101-102° till March 8th; large solid tumour behind MacBurney's point.	March 31st, 1897.—MacBurney's incision; soft almost fluctuating swelling opened, from which a solid concretion came away; appendix found glued to cæcum on its outer side, tip had sloughed off; solid masses scraped away.	Purulent and perforated.	Healed by first intention.
29	Hospital	F., 24	None.	1st attack Jan., 1897; attacks of pain in right iliac fossa with nausea, which has continued for 3 months; not confined to bed; no tumour felt.	April 7th, 1897.—MacBurney's incision; no adhesions found.	Catarrhal; swollen mucous membrane; no constriction; no concretion; no fluid.	Healed by first intention.

30	Hospital	M., 24	1st attack March, 1897; 2nd attack April 19th, 1897; temp. 102°, lasting 10 days; no lump felt.	May 5th, 1897.—MacBurney's incision; appendix found bent on itself and adherent to front of cæcum all the way.	Catarrhal; constricted in two places; basal portion fibrous and mucous membrane absent; distal portion bulbous and containing thin fluid.	Healed by first intention.
31	Hospital	F., 18	1st attack June, 1896; 2nd attack July, 1897.	Sept. 29th, 1897.—Incision through sheath of rectus; swollen appendix adherent throughout its whole length to ileum.	Catarrhal; very thick walls, containing mucus only.	Healed by first intention.
32	Hospital	M., 30	None.	1st attack Sept., 1897; high temperature and large swelling above and near crest of ilium, which did not disappear at end of 5 weeks.	Probably purulent; no perforation.	Healed by first intention.
33	Hospital 1898.	M., 21	1st attack Aug., 1897.	2nd attack Dec., 1897; no lump to be felt.	End bulbous and filled with pus; stricture in the middle.	Healed by first intention.
34	Hospital	M., 19	1st attack Sept., 1897.	2nd attack Dec., 1897; no lump felt.	Catarrhal; constricted in two places, where the lumen had disappeared, and bulbous between the constrictions.	Healed by first intention.

No.	Year.	Sex and age.	Previous attacks.	Present attack.	Operation.	Condition of appendix.	Result.
35	1898 Private	M., 25	1st attack 1894. 2nd attack 1895. 3rd attack 1896. 4th attack 1897. 5th attack 1897.	6th attack Jan. 1st, 1898; a definite tumour remains.	Jan. 20th, 1898.—MacBurney's incision; numerous adhesions; appendix was adherent to cæcum, ileum, and omentum, and the whole fixed to abdominal wall.	Purulent; bulbous swelling towards base, with pus in it; shut off from cæcum by constriction; tip fibrous; lumen obliterated.	Healed by first intention.
36	Private	F., 26	None.	1st attack 31st Dec., 1897, with general peritonitis for a fortnight.	Jan. 22nd, 1898.—Median incision; found colon, ileum, omentum, and small intestine all sticking together in one mass, fixed to abdominal wall; faecal concretions free in abscess cavity; appendix held only by its meso-appendix; no opening in cæcum found; wound closed without drainage.	Purulent and distended with pus, it had spontaneously separated at line of ulceration.	Wound healed by first intention, but convalescence prolonged from slight general peritonitis.
37	Private	M., 39	1st attack 1883, and has frequently had pain and tenderness in right iliac fossa since above.	2nd attack Dec. 25th, 1897; temp. 103°, lasting 10 days; large and tender swelling above Poupart's ligament and crest of ilium, which disappeared before operation.	Feb. 4th, 1898.—MacBurney's incision; appendix found loosely adherent to outer side of cæcum, and bent upon itself.	Catarrhal; long and large appendix; no pus, no constriction, but contained light coloured fecal matter.	Healed by first intention.
38	Hospital	M., 36	None.	1st attack Jan. 17th, 1898; rigor, temp. 104°; general peritonitis; lump felt under anæsthetic.	Feb. 19th, 1898.—MacBurney's incision; appendix bent on itself, and adherent to cæcum and to anterior abdominal wall.	Catarrhal; large and long, bulbous at tip and at base; constricted in middle where mucous membrane was absent.	Healed by first intention; blood let out by director beneath; cicatrix finally healed by March 28th.
39	Hospital	F., 39	1st attack Sept., 1896; sup-puration and fecal discharge.	3rd attack Feb. 11th, 1898; pus coming through skin;	March 11th, 1898.—MacBurney's incision; found	Purulent; large and bulbous	Healed slowly by March 31st;

40	Hospital	M., 31	charge. 2nd attack June, 1897; fecal abscess incised.	None.	1st attack Feb. 12th, 1898. A definite hard tumour remains at anterior superior spine of ilium.	this sinus healed March 7th. appendix adherent to abdominal wall, opposite old sinus; excised latter as well as appendix. Mar. 16th, 1898.—MacBurney's incision; pus found in cavity to outer side of cæcum; appendix doubled on itself with tip adherent to cæcum; on separating tip of appendix a hole was found in cæcum close to base, which was sutured and gauze drain inserted.	throughout; perforated at tip. Purulent, perforated at its tip, and kinked in middle.	pus escaping at old sinus. Suppuration; healed Apr. 13th.
41	Private	F., 45	History of 2 years' occasional pain, sickness, and diarrhoea.	Dec. 20th, 1897.—Acute attack of pain and vomiting, which lasted about a fortnight; since then the symptoms return directly she gets up.	Mar. 9th, 1898.—Incision through sheath of rectus; appendix loosely adherent, with bulbous extremity.	Catarrhal, fibrous base without lumen; bulbous end like a cyst, filled with muco-purulent secretion.	Healed by first intention.	
42	Hospital	M., 43	Twelve attacks in 8 years, with frequent pain between the attacks, preventing him from working for a day or two.	Mar., 1898.—No swelling felt, but tenderness on pressure.	Apr. 20th, 1898.—MacBurney's incision; cæcum and colon for 5 inches in extent very thick from chronic inflammation, and covered by adherent omentum; appendix buried beneath cæcum and ileum.	Catarrhal; appendix of normal length, was attenuated at its distal end, and swollen at base.	Healed by first intention; fluid formed beneath the scar, but quickly healed.	
43	Hospital	M., 20	1st attack Sept., 1897, and unable from pain to work ever since.	2nd attack Feb., 1898; large swelling remains in right iliac fossa.	May 11th, 1898.—MacBurney's incision; omentum adherent over a large area; appendix tucked up under ileum over iliac artery, and so bent on itself that the apex presented towards the groin; it was so firmly adherent it had to be cut out with knife and scissors.	Catarrhal; very long, swollen, and vascular appendix, retaining its curve after removal; lumen unobliterated at any point.	Sickness for 3 days, which ceased after a purge; healed by first intention.	

Operations for Appendicitis.

No.	Year.	Sex and age.	Previous attacks.	Present attack.	Operation.	Condition of appendix.	Result.
44	Private	M., 21	None.	1st attack Apr. 16th, 1898. 22nd.—Acute peritonitis. 24th.—Stinking abscess opened. See Table I, Case 19.	May 14th, 1898.—Removed appendix through abscess cavity.	Purulent; perforation at base, and several faecal concretions.	Suppuration; gauze drain, but temperature remained normal after operation. Healed by first intention.
45	Hospital	M., 33	None.	1st attack May 10th, 1898. Mild throughout; pain and tenderness; unable to work; can feel small tender lump in right iliac fossa; temperature normal.	June 15th.—MacBurney's incision; appendix adherent to under surface of caecum, and much curved.	Swollen throughout; inspissated purulent secretion within; no constriction.	Healed by first intention.
46	Hospital	M., 27	None.	1st attack May 13th, 1898. See Table I, Case 20.	June 28th.—Removed appendix through MacBurney's incision; peritoneum and omentum adherent all over; appendix curled up at end of caecum, to which it was adherent.	Perforated at the base; faecal concretion and pus.	Healed by first intention.
47	Private	M., 22	Two attacks between Jan. and Mar., 1898.	3rd attack June 8th.	July 6th.—MacBurney's incision; appendix with S-shaped curve adherent to caecum and itself.	Catarrhal, very long, with slight constriction near its distal end, with two tiny concretions beyond.	Healed by first intention.
48	Hospital	M., 16	Six attacks in last 2 years.	7th attack June, 1898; temp. 105·8°; no tumour felt.	July 12th.—MacBurney's incision; appendix adherent to omentum and anterior abdominal wall; no pus.	Catarrhal, wall thin at one spot.	Healed by first intention.
49	Hospital	M., 42	For 15 years has had slight attacks every 2 or 3 months lasting 2 or 3 days, never sufficiently severe to keep him in bed till the last at-	Admitted July 29th, 1898, having had a severe attack in March, accompanied by diarrhoea and vomiting.	Aug. 3rd.—MacBurney's incision; appendix adherent to under surface of caecum and acutely flexed in the middle, the two halves ly-	Catarrhal; no stricture; attacks apparently due to flexion.	Healed by first intention.

50	Hospital	M., 16	tack.	None.	Admitted Aug. 2nd. Acute attack 9 days ago; swelling with doubtful fluctuation at crest of ilium.	ing parallel and adherent to one another. Aug. 3rd.—MacBurney's incision in usual position; peritoneum not adherent; stinking abscess found to outer side of cæcum round appendix, nearly reaching to kidney; appendix removed; gauze drain.	Purulent; peritoneum free from infection.	Healed by Aug. 22nd.
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In the table of quiescent cases, Table II, it is noticeable that there is a larger proportion operated on at the end of the first attack of appendicitis during the last two years than in the first two years. This may be accounted for by the greater confidence in the success of the operation, which has induced me to urge the radical treatment at once more earnestly than I did at first.

I am quite aware that opinions still differ as to whether it is right to submit a patient to the removal of the appendix in the quiescent stage after the first attack. Many argue that we should at least wait till a second attack has taken place, for the patient may never have a second attack.

This was undoubtedly the opinion held by all some years ago, before experience had been gained of the risks that were run by the operation. But most surgeons will, I think, allow that the risks of operation are now so small that it is not worth while to encourage a patient to remain in doubt as to the future. This is particularly the case where a lump remains to testify to the serious nature of the first attack. The swelling that is left after an acute attack varies very much in its size and in the length of time it takes before it finally disappears. Tenderness is sometimes all that is to be found on gentle pressure, a definite swelling being scarcely noticeable. In some cases, on the other hand, there is a large swelling which only very slowly undergoes resolution. It is in this class that operation should be most earnestly recommended. For it is probable that so large an inflammatory swelling indicates an infective rather than a catarrhal appendicitis. It is, however, impossible to be quite sure of one's diagnosis on this point, for I have seen a very large swelling, and at the subsequent operation the appendix only showed traces of the catarrhal form of inflammation.

The converse of this statement is, I think, also true, namely, that in some cases there is very little swelling, and none at all to be detected at the time of operation. In such instances one has hazarded the conjecture that probably the case was one of catarrhal appendicitis, and yet at the operation the appendix has sometimes been found perforated. The amount of swelling must, therefore, only be used as an

argument and not as a proof of one form of inflammation against another.

The fact has, I think, been proved that the removal of the appendix in the quiescent stage is one of the most satisfactory operations in the whole range of surgery, and this quite irrespective of the particular form of appendicitis. Consequently whatever be the form of inflammation which is suspected, it is the safest rule to try and induce the patient to submit to operation after the first attack is safely over. Although I have no statistics to offer, I believe the mortality after operation to be lower than that of those who are left to run their chances of a second attack. If it be contended, as it sometimes is, that those who have no permanent swelling really run no risk from their recurrent attacks, I would answer that some of the very worst cases, namely, those with general peritonitis, have oftentimes no local swelling to indicate the origin of their dangerous attack. Moreover, as is stated above, there is no certain means of deciding which are the infective and which are the catarrhal cases. In fact, they may be catarrhal at one time and infective at another. In some of the appendices which are removed we find a definite stricture or an entire absence of mucous membrane at one spot with a bulbous extremity. The first attack of catarrhal inflammation may produce such a result. The bulbous extremity has then no means of emptying its secretion into the cæcum, and yet it may not be large enough to be felt through the abdominal wall, or it may be hidden beneath the ileum. Such a condition must remain as a constant menace to the patient's comfort, if not to his life. It is like an isolated portion of the intestinal tract, which is known to be a highly dangerous condition to leave within the abdominal cavity.

A similar result may be produced by an acute flexion of the appendix on itself, which is also another and frequent result of catarrhal appendicitis.

Fæcal concretions are also found in the swollen appendix, and are sometimes situated in pouches or dilated portions of the tube, and are extremely unlikely to return to the cæcum. They must then remain as an irritant and an exciting cause of subsequent attack.

I have attempted in the table of cases to show the particular condition in which each appendix was found.

Time most suitable for operation.—So soon as the acute stage has passed and the patient is apparently convalescent, the operation of removal of the appendix ought to be carefully considered. If there is still a marked swelling in the iliac fossa it is better in my opinion to wait, if it be possible, till it is almost entirely absorbed. It is much more difficult to find the appendix in a large inflammatory swelling in which important structures are liable to injury whilst separating adhesions than tracing it from its known relation to the anterior band on the cæcum when the latter is not obscured by surrounding inflammatory exudation. The patient should not, however, be allowed to get up and then brought back to bed. He is in a much more favorable condition for operation if he is kept at rest in the recumbent position and his diet carefully regulated. It is also possible that a previous peritonitis from which a patient has recovered renders him more or less immune from a fatal attack in disturbing these adhesions;¹ and granting that this immunity can only last a short time, the operation of removal of the appendix is better done within the time during which such immunity might be expected to last. This argument should induce us not to postpone the operation beyond the limit of time indicated, namely, the disappearance of the inflammatory swelling, from which the general infection has taken place.

In some cases, however, the swelling does not disappear within a reasonable time. For example, at the end of five weeks it can sometimes be felt as a distinct tumour. In such cases, so long as the acute symptoms have gone, I am inclined to urge the operation at once.

DETAILS OF OPERATION.

Incision.—In my first six cases I made the incision without reference to the direction of the muscular fibres of the

¹ Herbert E. Durham, "On the Clinical Bearing of some Experiments on Peritoneal Infections," 'Med.-Chir. Trans.,' vol. lxxx, 1897, p. 191.

abdominal wall, generally in the neighbourhood of the right semilunar line. A ventral hernia was a not unnatural consequence of such an incision, as the deeper muscles—internal oblique, and transversalis—were divided at right angle to their direction. The most careful suturing often failed to keep the retracted muscles in apposition. Since 1895, when I adopted MacBurney's* method, I have had no further trouble with ventral hernia. I have not since then seen a case in my own practice.

An oblique incision is made about 4 inches in length with its mid point crossing a line drawn from the umbilicus to the anterior superior spine of the ilium, and at a distance of about 1 inch from the iliac spine. The aponeurosis of the external oblique and as much of its muscle as may be necessary is divided in the same direction and to the same extent. The internal oblique and transversalis are now divided or separated at right angles to the first incision, *i. e.* in the direction of their fibres. It does not require much use of the knife except where the muscles become tendinous at their junction with the sheath of the rectus. With use of four retractors the wound becomes lozenge-shaped, and allows of ample room for the manipulation of the cæcum and its appendix. In closing the wound the peritoneum and transversalis fascia are united by a few very fine silk sutures. The transversalis and internal oblique muscles fall together so closely that they scarcely require any sutures. Personally I put in a few catgut sutures so as to ensure the absence of any space for collection of blood. The aponeurosis of the external oblique and its muscular part are similarly approximated, and the skin united by horse-hair.

My colleague Mr. Battle has proposed a similar method and with the same object in view, by making the incision through the sheath of the rectus and drawing that muscle without division to the inner side. I have for some years used this means of approach in the centre of the abdomen instead of dividing the tendinous fibres of the linea alba, making the incision from half an inch to an inch to the

* Charles MacBurney, 'Annals of Surgery,' July—Dec., 1894, p. 38.

outer side of the central line and drawing the rectus outwards. But I do not think that his proposal is good for the large majority of cases of appendicitis, for the appendix is so often found to the outer side of and beneath the cæcum. One cannot then see the appendix at the moment of liberation, when pus so often escapes, as it is overhung by the undivided muscles on the outer side. If the appendix, however, is beneath the ileum, as it sometimes is, the position of the opening is admirable. I have, therefore, as a routine method adopted MacBurney's incision.

Opening the peritoneum.—If there be an inflammatory swelling this may be adherent to the anterior abdominal wall. It is well, therefore, to select a place at which such adhesion is not likely to be present, for otherwise bowel might possibly be opened. The most favorable place under such circumstances is at either end of the gaping wound, and generally at the upper end, which will as a rule be farthest removed from the centre of the inflammatory swelling.

To find the appendix.—It can generally be felt, but sometimes it is extremely difficult to know exactly where it is placed. It is then best to recognise the cæcum by its junction with the ileum and then trace the anterior band which leads directly to the base of the appendix. Occasionally the omentum completely covers both cæcum and appendix, to both of which it may be adherent. The omentum has to be unravelled and tied off in sections. Having recognised the base of the appendix, sponges should be placed in such a position as to catch any fluid that may escape as it is being detached from its surrounding adhesions; one towards the pelvis and another towards the loin will generally be sufficient.

Position of appendix.—The appendix may be either lying to the outer side of the cæcum, to which it is more or less firmly adherent, or it may be beneath the cæcum, which has to be turned up to release it, or beneath the ileum. On the other hand, instead of being turned backwards at its junction with the cæcum it may be twisted or turned in any direction at its centre, forming a kind of "kink" in the middle. The extremity of the appendix is then often bulbous from the inability of its secretion to return to the cæcum. Again,

this little troublesome organ may be stretched out almost at its full length, and either adherent to the anterior abdominal wall or to the floor of the iliac fossa. In the latter case it may pass inwards across the iliac artery and be adherent at its extremity to the wall of the bladder or turned slightly backwards over the course of the ureter. In each of these positions the extent to which it is adherent and the amount of surrounding inflammation will vary considerably. Sometimes it is easily separated by inserting the finger beneath it, whilst at others it will require very careful dissection to avoid damaging the part to which it is adherent. At the moment, too, of separating it an escape of pus more or less offensive may indicate a perforation of its wall, which has to be carefully dealt with to avoid fouling the surrounding peritoneum.

Removal of appendix.—The cuff-flap operation in the removal of the appendix is the one most usually adopted. But really I think it matters little exactly how it is removed, provided the mucous membrane is invaginated into the cæcum and the peritoneum is carefully sutured over the point of section. Care should, of course, be taken that the contents are not allowed to fall into the peritoneal cavity when the appendix is severed from the cæcum. The meso-appendix should be ligatured with a fine silk ligature before the separation is completed. Any granulation tissue which may be left after removal of the appendix on any of the surrounding tissue to which it has been adherent should be cut away with scissors. This is necessary in those cases in which perforation has occurred, as these granulations undoubtedly contain the organisms of suppuration. If this cannot be efficiently done the part should be well scrubbed with a pad of absorbent wool soaked in 1 in 1000 solution of perchloride of mercury.

Closure of abdominal wound.—As before stated, the wound is reunited in layers. The peritoneum and transversalis fascia are carefully sutured with fine silk. For the muscular layers I have lately used catgut, as I have on a few occasions found that in muscular tissue the silk will not remain permanently embedded, but reappears some weeks after the patient is well. It is only in the muscle itself that I have

experienced this inconvenience. The silk has I know in these cases been carefully sterilised, and the same silk used elsewhere than in muscle has not reappeared, so that I have thought the difference in behaviour has been due to the constant slight pull of the muscle when the patient begins to move about. I have not found any drawback from the catgut. It lasts long enough and has not caused suppuration. It is prepared by washing in ether and soaking in perchloride of mercury. The skin is separately united by horse-hair sutures, without, as a rule, leaving any opening for drainage.

Drainage by tube or gauze.—In a very few instances indeed has drainage of any kind been employed, and those were chiefly in the earliest cases, before experience had been gained of its being unnecessary. In the table of cases where drainage is not mentioned it has not been used. It is likely to be followed by a hernia, and therefore should not be used unless it can be clearly shown to be desirable. If the granulation tissue at the spot from which the adherent appendix has been removed be carefully scraped or cut away with scissors, or, if this be impossible, thoroughly scrubbed with a solution of perchloride of mercury, drainage will be, in my opinion, quite unnecessary. In Case 3, Table II, an abscess did subsequently form, but I had not done what I am now advocating; and the case of death recorded in the table was one in which drainage would not, I think, have affected the issue.

The occurrence of hernia after operation.—In my first few cases I ordered a belt, and did occasionally see bulging of the scar when the patient coughed. But since I have adopted MacBurney's incision and the union of the divided abdominal wall in separate layers I have not ordered a belt at all, and have never seen any subsequent necessity to do so.

Healing of the wound.—This has nearly always been accomplished by first intention. Occasionally, as in all cases where drainage is not employed, blood has been found beneath the healed skin at the first dressing a week after operation. A director pushed in through the surface has allowed the fluid to escape, and in a few days the wound has been found again soundly healed. Where an abscess

has subsequently formed it is mentioned in the table under "Result."

Mortality.—One death is recorded in Table II, No. 12. I cannot help thinking that in this instance the patient had received his dose of poison immediately before the operation, for, unknown to me at the time, his temperature had already risen, and the vomiting which began immediately afterwards was at once of the kind usually seen in well-marked peritonitis.

PATHOLOGICAL ANATOMY.

Dr. Hawkins, in his 'Diseases of the Vermiform Appendix,' has given an excellent account of "the part played by the appendix" (pp. 22—56), to which the reader may be referred for fuller details of the pathological anatomy.¹

An analysis of the conditions found at the operation will, I think, help to throw some light on the reason why these cases are so especially liable to recurrent attacks.

Normal appendix.—One appendix looked so entirely normal it was not removed (Table II, No. 7). I think this was a mistake, for although the larger proportion of cases of catarrhal appendicitis are accompanied by peritoneal adhesions, it is quite clear that a few of the slighter cases may return to the normal condition, and would then show no evidences of having been inflamed at the time at which the operation is usually performed. It seems to me that if the operator has felt justified from the history and the severity of the symptoms in opening the abdomen, it is far safer for the patient's future comfort to remove the appendix even although it appear to be a perfectly healthy one.

Catarrhal appendicitis.—I have classified twenty-five of these fifty cases as being catarrhal at the time of the operation. It is desirable to point out the particular indications which have led me to label any given case as catarrhal. When the appendix has shown signs of ulceration by perforation it has been excluded from the catarrhal

¹ 'Diseases of the Vermiform Appendix,' by Herbert P. Hawkins; published by Macmillan & Co., 1895.

cases. The presence of external adhesions without any pus or perforation has not prevented me from considering the case as catarrhal; whilst the presence of pus outside the appendix, even when it has not been perforated so far as I could see, has induced me to classify the case as purulent or infective.

Perforated.—There were ten cases in which the appendix had a distinct aperture in its wall formed by ulceration.

Purulent or infective.—There were fourteen cases in which there was either a perforation of the wall of the appendix or pus in the connective tissue outside.

Stricture.—If in slitting up the appendix after removal there was a distinct absence of mucous membrane at any given point in the length of the appendix, the case was considered as one having a stricture. In several instances there was more than one such stricture. There were about eleven cases in which this condition existed.

Bulbous.—In most of the cases in which a stricture was found the part beyond was dilated into a pouch and distended with muco-purulent secretion. Eleven cases were noted to have this condition.

Flexion.—In all the cases in which the appendix was found in an abnormal position it was flexed or bent at its base. But in addition to these cases the appendix was sometimes bent backwards or sideways in the middle, more or less acutely. Occasionally it will be noticed that this flexion was so acute that the apex was absolutely in contact with its base, and in one instance the apex had perforated the cæcum at the point of contact. An S-shaped condition was sometimes found, *i. e.* one in which both flexion of the base and flexion in the middle existed in the same specimen. In many cases this flexion accounted for the bulbous condition of the apex. There were fourteen cases in which this flexion of the appendix in the middle of its length existed.

Atrophy.—There were three cases in which only the base of the appendix remained, the rest having entirely disappeared or being represented only by a fibrous cord. It will be noticed that these cases, Nos. 4, 35, and 42, had had numerous previous attacks. This interesting condition has been spoken of as *appendicitis obliterans*. It is clear that there

are some cases in which numerous attacks will gradually lead to the complete but slow destruction of the appendix. Meanwhile the patient is exposed to the same risk of purulent peritonitis as in the other cases, and, moreover, is incapacitated for the ordinary duties of life till the atrophy is completed.

Concretions.—There were seven cases in which fæcal concretions were found. To my mind this appears to be an unimportant condition in view of the above pathological review.

Typhlitis.—There was one case, No. 42, in which there were distinct evidences of typhlitis. The walls of the cæcum and adjoining colon for five inches in extent were thick and fibrous, quite unlike the ordinary condition which one finds in the operation for the removal of appendix. In my notes made at the time I wrote, "It was obvious that it was more truly chronic cæcal trouble than appendicitis." The appendix was removed because it was buried beneath the cæcum and adherent to surrounding tissues. It was affected by the same chronic catarrhal inflammation as the cæcum. But this operation is not likely to cure the patient of his trouble, as it undoubtedly does in the ordinary cases with which we have to deal. Although the patient had a long history of twelve attacks in eight years, and was also frequently obliged to give up work for a day or two in the intervals between the attacks, yet there was nothing special in his history or in his examination which made me suspect the nature of his case before the operation. The fact that the cæcum and adjoining colon may be the principal seat of disease in this region, must be interesting to those who have lately begun to think that the appendix is alone responsible for these recurrent attacks of inflammation in this part of the intestinal tract. It must be, however, extremely rare, as the operation for removal of the appendix is now done with very great frequency, and yet there are very few similar cases recorded in surgical literature.¹

¹ Dr. Joseph Hearn, 'Annals of Surgery,' June, 1898, p. 786.

ON THE
CURE OF AN INOPERABLE TUMOUR BY
MEANS OF COLEY'S FLUID.

BY WILLIAM HENRY BATTLE, F.R.C.S.,
ASSISTANT SURGEON TO ST. THOMAS'S HOSPITAL, AND SURGEON TO THE
ROYAL FREE HOSPITAL.

It would occupy far more space than is available in these Reports were I to attempt to consider the numerous methods of treatment which have been suggested and tried in times gone by for the cure of tumours without operation, or of those which the surgeon considers to be beyond relief by operation. Most of them have been unscientific, and have proved quite useless, excepting to fill the pockets of the untruthful owner. My intention is merely to bring forward a case of sarcoma which was considered inoperable by all who saw the patient. Its nature was definitely ascertained by most competent pathologists to be spindle-celled growth. And yet after a series of injections into the subcutaneous tissue of a preparation of the toxins of the streptococcus of erysipelas and the *Bacillus prodigiosus* in definite proportions, known as Coley's fluid, the man has completely got rid of his tumour and the fear of impending death. The case

establishes one fact, therefore, that the disappearance of a tumour may follow the use of Coley's fluid, although the tumour be a malignant one of ascertained nature. I will first give a description of the case, and afterwards add a few remarks on the treatment and its application.

G. C—, a labourer æt. 30, first attended in my out-patient department at St. Thomas's Hospital on December 21st, 1897, and was admitted to Albert Ward under the care of Mr. Mackellar on the same day.

He complained of a swelling of his right shoulder and of his right arm, and gave the following history:—Between three and four months ago he noticed a swelling under his arm, accompanied by pain, and shortly afterwards a lump appeared over the right side of the breast-bone. There had been a dull aching pain and difficulty in movement of the arm since that time. Two weeks ago he noticed a lump in the region of the right collar-bone, which has rapidly increased in size, and during the same time there has been swelling of the right hand and arm.

He was an unusually well-developed, muscular man, and applied at the hospital because the swelling incapacitated him for work. On examination the first thing observed was a fulness in the region of the right shoulder, with an apparent increase in size of the right upper extremity. It was also noticed that the right arm was carried somewhat away from the chest. The shoulder on the right side appeared to be at a higher level than the left.

Below the right clavicle there was a large swelling, which pushed forward the pectoralis major, was most marked just below the bone, but could not be well defined in any direction. It was fixed, elastic, but not fluctuating. Above the clavicle, in the posterior triangle, was a firmer swelling rather larger than a hen's egg, attached to and apparently extending under the bone, so that it was rather fixed. Its upper margin was rounded and fairly well defined, whilst its surface appeared somewhat nodulated, giving the impression that it was a mass of adherent diseased glands. The skin was not adherent. Underneath the arm, along the inner side of the axilla and a little below the apex, was a collection of very hard and knotty glands. At the level of the fourth

costal cartilage, and overlying its attachment to the sternum and the adjacent portion of the bone, was another isolated, rounded, fluctuating swelling, with a fixed hard base and reddened skin, measuring about one inch and a half in diameter. Two smaller nodules were present in the skin below the right nipple, one about the size of a pea, the other that of a horse-bean.

The superficial veins over the right upper arm and shoulder were enlarged, and the right hand and arm were very swollen and œdematous; the radial pulses were equal. Over the front of both legs there was an irregular red rash and some peeling of the epidermis, which he had noticed about three weeks.

The patient, who is an ex-Guardsman, had syphilis with well-marked secondary symptoms six years ago.

After admission he was kept in bed for a time, and iodide of potassium in 20-grain doses given three times a day. On January 5th it was noted that there was much less œdema of the arm, but no diminution in the size of any of the swellings. The same day ether was administered and a piece of the tumour below the clavicle removed through an incision four or five inches long by Mr. C. S. Wallace; the swelling over the sternum was also incised and scraped, the contents being of a yellow cheesy nature; part of this was also reserved for microscopical examination.

On the 13th a report was received from Dr. L. L. Jenner, director of the clinical laboratory, that examination of the growth showed it to be a fibro-sarcoma with giant-cells. Mr. Shattock agreed with this opinion.

This statement confirmed the diagnosis of sarcoma which was held, and apparently the patient was condemned to a speedy and painful death, for it was evident that there was no possibility of removing such a mass of growths from the region affected. The patient had passed to my charge owing to the illness of Mr. Mackellar, and having seen some cases in which tumours apparently of a sarcomatous nature had disappeared under the treatment by Coley's fluid, I thought it right to give this patient the possible benefit of a trial. That there were risks in its employment I knew from published accounts of cases, and therefore I did not paint

the prospect of success in very glowing colours, nor did I minimise the danger. The patient expressed himself quite willing to undergo anything that gave a chance of recovery, and treatment was commenced on January 21st.

Between this date and March 21st the fluid was given in $\frac{1}{2}$ -minim doses injected into the subcutaneous tissue of the right shoulder; as a rule one injection was administered every other day. Twenty-four injections were given during this period.

Occasionally a little local redness was noticeable after the injection, but this was not particularly marked, showed no tendency to spread, and did not prevent the man's going about and helping in the ward. During the treatment he was not kept in bed.

After the injection on January 26th the temperature rose to 100° in the evening; after that on February 11th to 99.4° ; February 14th to 99.6° ; February 16th to 100° . Otherwise during this period there was no general reaction. He took food satisfactorily, slept well, and said that he felt quite well.

Through a misunderstanding he continued to take the iodide mixture until March 6th, after Coley's fluid was tried; it was then omitted.

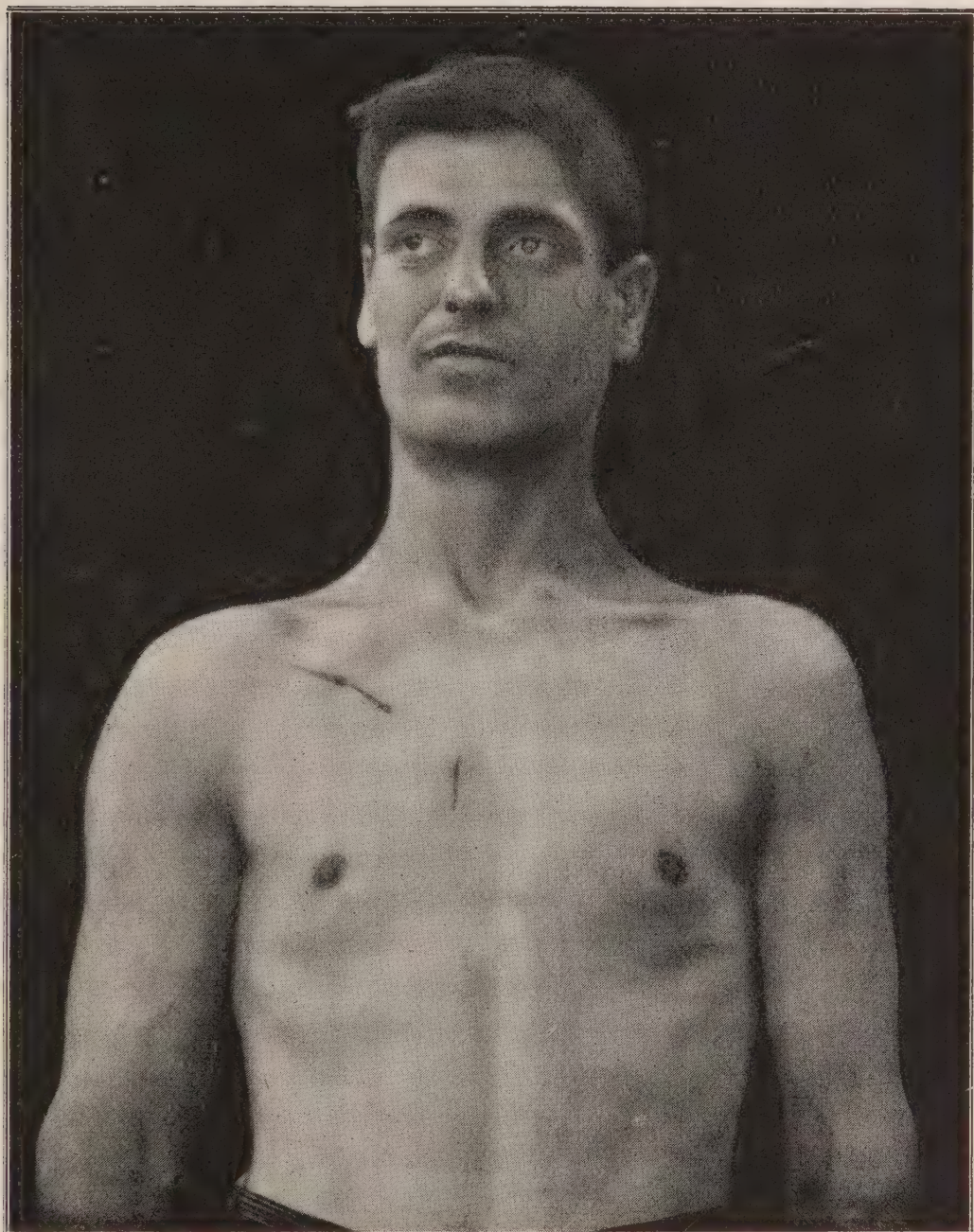
On January 28th, after three injections of the fluid, the tumour over the clavicle seemed to be extending rather further upwards and inwards, but not towards the axilla.

On February 4th, after six injections ($\frac{1}{2}$ minim) the glandular enlargements were considered to have diminished; the swelling below the clavicle was more compact, and harder.

On February 6th, after ten injections, the note was made that "the gland above the clavicle is still palpable, about the size of a small hazel-nut. The swelling under the clavicle is less obvious at first sight, but on palpation seems to be about the same size. The patient has had some slight pain starting from the region of the tumour towards the sternum."

February 19th.—It is stated that since the last note there has been a distinct diminution in the size of the swelling on its sternal side, there being no swelling detected under the inner half of the operation scar. Yesterday another swelling similar in appearance to the clavicular one was noticed just

above the spine of the right scapula ; it is more elastic than, and not so hard as the former one, and is moveable back under the skin and above the deeper structures. Patient has had some pain recently in this region.



Shows the condition of patient when undergoing treatment. The scars of exploratory incisions are shown, also the increase in size of the right arm. (From a photograph by Mr. Cobb.)

28th.—Both sets of glands have almost entirely disappeared.

Although the course of the case was continuously towards

recovery, the man was becoming somewhat impatient at its slow progress, and the injections were increased in strength to one minim of the fluid. The increase was made on the 21st March, and fourteen injections were given before the 20th April, usually every other day. At no time did the temperature rise above 99° , nor did local disturbance ensue.

On April 16th it was noted that the swelling above the clavicle had almost disappeared, while the one situated below the outer half of the clavicle was reduced to the size of a walnut. The one near the right border of the sternum was considerably smaller.

The strength of the injection was advanced to two minims on the 20th April, and this was continued until the 11th May, nine injections being given altogether. The result was as before, a continued diminution in the swellings unattended with constitutional disturbance.

On May 7th it is said that the tumours showed great diminution in size; the one near the right border of the sternum is about one fourth the original size, whilst those about the clavicle can just be felt.

He left the hospital on May 11th, 1898, in good health, and beyond the scars on his chest made at the exploratory operation, and a localised sense of resistance under the right clavicle when pressure was made there, no trace was left of the large growths which were present on admission. Altogether forty-four minims of Coley's fluid were used.

He went to the country for a change, and returned on the 10th June in order to undergo the radical cure of a right inguinal hernia for which he had been wearing a truss during the past four months. The hernia is ascribed to a sprain received twelve months ago, and although it has increased gradually in size has not descended into the scrotum. The hernia was the size of an orange. The external pillars of the ring were somewhat lax, and the ring itself large.

Radical cure by the method of Bassini was performed on the 15th of June. The sac was exposed, separated from the cord and surrounding structures, ligatured with silk at the neck, and removed. The external oblique having been cut so as to expose the canal and internal ring, the cord was

then separated, the conjoined tendon sutured to Poupart's ligament with two silk sutures behind it, the cord replaced in its normal position, and the canal re-formed by suturing of the external oblique and the upper part of the pillars of the ring. Cyanide dressings were applied.

No complications followed the operation; union took place without suppuration or even rise of temperature. The external sutures were removed on the eighth day, and the patient left the hospital on July 4th, eighteen days after operation.

This man was last seen on July 19th, and was then in good health. The local conditions as regards the site of the tumour, and also as regards the inguinal region, appeared very satisfactory. In the former situation there was no tumour, in the latter merely increased thickening about the canal and rings.

I am much indebted to the house surgeons, Messrs. Tuke and MacClean, for their attention to the case, also to the dressers, Messrs. Harwood and Chaudhuri.

It was the result obtained by Mr. Mansell Moullin in two cases of tumour of the pelvis that induced me to try the fluid suggested by Dr. Coley in this case. No microscopical examination of the tumours had been made, but in both instances the opinions of the surgeons who had examined them coincided with that of Mr. Moullin himself as to the sarcomatous character of the growths and the uselessness of operation. When I saw and examined the cases the tumour had almost if not quite disappeared in both instances. It is true that the exact nature of these tumours was unknown, but the clinical characters were those of sarcomata, and in the opinion of those who saw them not only was it probable that they would grow and prove ultimately fatal, but nothing could be done from a surgical point of view to arrest the progress of the disease; yet the growths had disappeared. It was evident, therefore, that Coley's fluid possessed a definite value in some cases of growth, although the trials made by others in this country had so far yielded unsatisfactory results.

To Mr. Moullin's monograph on the subject of the use of the

mixed toxins in sarcoma and carcinoma, and to Dr. Fowler's article ('Amer. Journ. of Med. Sciences,' August, 1898) on the use of animal toxins in the treatment of inoperable malignant tumours, I am indebted for much of the information on the subject which I place before my readers.

It has, of course, been known for many years (seventeenth century, Fehleisen) that growths of various kinds, chronic ulcers of the skin, lupus and other skin affections, occasionally disappear after an attack of erysipelas. Cases are not quite unknown where sarcomata have disappeared even without the onset of an attack of erysipelas, but they are very rare. Mr. Edmund Owen has told me of a case of disseminated melanotic sarcoma seen by him in consultation, all traces of which ultimately disappeared without any treatment whatever. But the effect of erysipelas has been so marked that it was suggested—and the suggestion was carried out—that patients with inoperable tumours should be inoculated from a case of erysipelas even before the microbic origin of erysipelas was known.

After that discovery a systematic attempt was made to produce an effect by the injection into the patient of a pure culture of the streptococcus. It was soon found that it was not always possible to induce an attack, and that it was still more difficult to limit the effects of the attack when it did occur. There are twenty-five cases recorded in which an attempt was made to induce an attack of erysipelas by inoculation. In every single case in which erysipelas occurred the tumour showed some change, although in four of the twelve it was slight. Only one was cured. In another the tumour disappeared, and there is no further record. A third remained free from recurrence for upwards of three years. Four died as a result of the attack.

The next step was to utilise Brieger and Fränkel's discovery, and employ the toxins produced by the streptococcus of erysipelas by themselves without the germ. This was less dangerous than when the living organisms were also injected, and the dose could be regulated, but the result was too feeble. Dr. Coley then decided to mix with it a proportion of a solution of the *Bacillus prodigiosus*, which has the power of intensifying the action of other pathogenic

germs, whilst itself without dangerous properties. These mixed toxins were much more powerful, and the effects on the tumour greater. Then the germs were grown together, and finally, in order to preserve whatever value existed in the bodies of the germs themselves, the mixed cultures were heated to a temperature of 58° — 60° C. for an hour, and then used without filtration. One part of the *Bacillus prodigiosus* solution was mixed with four of the erysipelas preparation. Dr. Coley recommends that a very small dose should be used at the beginning—one minim of the filtrate, for example, or half a minim of the unfiltered toxins, and that the dose should be gradually increased until the reaction temperature reaches 103° or 104° F. It is somewhat remarkable, considering the result in the case published above, that very little benefit has been met with where no reaction has been induced. Usually injections are given daily, aiming to get two or three well-marked reactions during the week. If well borne the treatment has been continued two or three weeks, and if at the end of that time no improvement has taken place, it has been discontinued. In some of the successful cases it has been kept up for three or four months, occasional intervals being allowed.

The change which takes place in the growths is one of fatty degeneration of acute progress, and this change takes place whether the injection is made into the growth or into some distant part of the body.

The latest report of Dr. Coley's statistics with which I am familiar is the one given by Dr. Fowler from information supplied by Dr. Coley ('Amer. Journ. of Med. Sc.,' p. 177, August, 1898).

Total number treated, 124. Of these 76 were round-celled, 16 spindle-celled, 5 mixed-celled, 8 melanotic round-celled, 2 chondro-sarcoma, 11 sarcoma in which the type of cells was not given, and 6 were cases of inoperable sarcoma in which a purely clinical diagnosis was made.

1. *Round-celled sarcoma* (76 cases).—Of these, in only 2 did the tumours disappear under treatment. Of the remaining 74, 38 were not appreciably affected by the treatment; in 36 more or less improvement was noted.

2. *Spindle-celled sarcoma* (16 cases).—Of these 9 disap-

peared entirely ; in the remaining 7 marked improvement was manifested. In not a single case of this type of the disease was there failure to bring about marked changes in the growth.

3. *Mixed-celled sarcoma* (5 cases).—In 1 case in this group the growth disappeared entirely, remained away for three and a quarter years, and then recurred ; 3 of the cases have improved, and 1 was unimproved.

4. *Melanotic sarcoma* (8 cases).—Two cases of this group showed slight improvement, while the remaining 6 were unaffected by the treatment.

5. *Chondro-sarcoma* (2 cases).—One of these, a very large growth, disappeared and recurred at the end of seven months ; the other was slightly improved.

6. *Sarcoma* (type of cell unknown).—Of these 1 disappeared, 5 were improved, and 5 were unimproved.

In addition to those cases in which a microscopical diagnosis was made, the 6 cases of inoperable sarcoma in which a clinical diagnosis was made should be taken into account. Of these 2 were cases of osteo-sarcoma, in one of which the tumour disappeared ; in the other improvement was noted. In the remaining 4 cases the growth sprang from the soft parts ; 2 of these were improved, and in 2 cases no improvement was apparent.

In the grand summary it may be stated that in 16 cases the tumours disappeared entirely, and that in but 1 of these was the crucial test of microscopical diagnosis wanting.

To these must be added 15 additional cases of sarcoma with 1 entire success and 1 case in which the tumour almost entirely disappeared. This makes a total of 140 sarcomata, in 17 of which there was a complete disappearance of the growth. Of the cases which have not relapsed, 1 has exceeded the four-year limit, 1 has exceeded the three-year limit, and 2 have exceeded the two-year limit. In addition to this 1 has passed the year limit with no sign of recurrence, and is still under observation with no recurrence, and 2 are respectively two and five months, free from recurrence after cessation of the treatment.

Of the recurrences the largest free interval was three and a quarter years, when a return in the abdomen resulted

fatally. The shortest time that a patient remained well after complete disappearance was six months. In one case of recurrence the tumours disappeared a second time under the toxins. In one of Coley's cases, angio-sarcoma, the tumour diminished in size and was excised.

Coley gives a series of cases treated by other surgeons.

Sarcomata.	No.	Disappeared.	Improved.
Spindle-celled . . .	6	5	1
Round-celled . . .	9	7	2
Type not mentioned . .	5	3	—
Clinical diagnosis only .	4	2	2

In this country Mr. Mansell Moullin has obtained a success in three cases out of nine (see below), whilst Mr. Butlin and Mr. Sheild have reported failures. At St. Thomas's one case, a sarcoma of the sternum in a female of sixty, who was admitted from my out-patient department under the care of Mr. Makins, diminished considerably under treatment, but she left before the growth had disappeared, and it has not been possible to trace her. With the exception of the case which I have recorded in full, no other case has shown any benefit in St. Thomas's under this treatment. A medical man who was under the care of Dr. Sharkey for malignant disease of the peritoneum, and for whom I performed abdominal section with the view of relieving urgent dyspnœa due to upward pressure of the diaphragm, was treated afterwards at his own home by the injection of Coley's fluid. An examination of the growth, a piece of which was removed at the operation, proved it to be a spindle-celled sarcoma. "He improved physically and intellectually, and had diminished an inch in girth," when unfortunately it occurred to his medical attendant (as recommended in some cases), to inject the fluid into the growth. This was followed by a rigor, distension of abdomen, vomiting, a high temperature, &c., and death in a few hours. I have tried it for a case of extensive lymphadenoma recurring after several operations; for a case of fibroma of upper end of humerus, and for a large sarcoma of subclavicular region and of glands, but without benefit to the case of lymphadenoma. The fibroma has diminished in size; the sarcoma has shown no improve-

ment. These cases are still under observation at the Royal Free Hospital.

Lassar ('Deutsch. med. Woch.,' July, 1891), Czerny ('Munch. med. Woch.,' September, 1895), Sprinck ('Ann. de l'Institut Pasteur,' 1892), Freidrich ('Langenbeck's Archives,' No. 50, p. 709), Campanini ('Il Policlinico,' July, 1895), Gotham Bacon ('Trans. Americ. Otol. Soc.,' 1895), Répin ('Revue de Chirurgie,' 1895), Senn ('Journal of American Med. Assoc.,' 1895), have tried it more or less fully, but with little if any success.

A committee of the New York Surgical Society, after a consideration of the results obtained, came to the following conclusions :

1. That the danger to the patient from this treatment is great.

2. Moreover, that the alleged successes are so few and so doubtful in character, that the most that can be fairly alleged for the treatment by toxins is that it may offer a very slight chance of amelioration.

3. That valuable time has often been lost in operable cases by postponing operation for the sake of giving the method of treatment a fair trial.

4. Finally, and most important, that if the method is to be resorted to at all, it should be confined to the absolutely inoperable cases.

This appears a severe condemnation of the treatment, but the appendix of cases, well authenticated, which is to be found at the end of this paper is a sufficient answer.

No other method of treatment is known which can effect an improvement such as that afforded by the mixed toxins prepared after Coley's method. It has been limited in its employment to inoperable cases—that is to say, cases in which no surgical operation, though of great severity, could afford a prospect of relief, even at great risk to the patient. Are we to refuse to employ it because there is danger attending its use—the patients are already condemned to death—or because a council of surgeons has decided against it? We may not know the exact character of the growth which the patient has, but the clinical characters being those of a sarcoma, we should try what can be done with Coley's fluid.

The spindle-celled growths, especially those of most rapid growth, have improved most satisfactorily with the fluid, but all have not reacted in an equal manner, and as yet we are unable to say why it is so, nor why the spindle-celled growths have been more amenable to its influence than the round-celled. It has been of very little use in the carcinomata.

The following are authenticated instances of the successful use of the toxins of the streptococcus of erysipelas alone or mixed with those produced by the *Bacillus prodigiosus*. (There are some other cases known to which I have no reference.)

Coley ('Amer. Journ. of Med. Sciences,' 1896). Male æt. 16. Spindle-celled sarcoma of abdominal wall, attached to pelvis and wall of bladder. Continued well three years after.

Female æt. 28. Fibro-sarcoma of abdominal wall, too extensive for removal, which was attempted. Continued well two and a half years afterwards.

Female æt. 15. Recurrent spindle-celled sarcoma of Symes stump and calf of lung. In January, 1894, disappeared under treatment, but returned in October, 1895, in right gluteal region. Diminished in size until February, 1896, when it was excised.

Female æt. 16. Very large spindle-celled sarcoma of scapula, involving chest wall. Disappeared in three months.

Female æt. 23. Round-celled sarcoma, involving liver, adjacent bowel, and omentum. Some months after commencement of injections further abdominal exploration showed complete disappearance of tumour.

Male æt. 55. Pulsating sarcoma of iliac fossa. Injections made for almost a year; slow diminution in size of growth, but patient disappeared before it had quite gone.

Male æt. 18. Spindle-celled sarcoma of hand, recurring after operations. Filtered toxins and then unfiltered toxins were used, and the growth disappeared.

Male æt. 38. Tumour of sacrum, probably sarcoma. Mixed unfiltered toxins used.

Dr. Owens (reported by Dr. Coley). Male æt. 7. Central probably myeloid sarcoma of tibia; much improvement; ultimate result doubtful.

Dr. McArthur (reported by Dr. Coley). Recurring osteosarcoma of radius; disappeared after three months' growth.

Dr. McArthur (reported by Dr. Coley). Round-celled sarcoma of orbit; tumour disappeared.

Drs. Stone and Allison (reported by Dr. Coley). Spindle-celled sarcoma of uterus, recurring and too advanced for hysterectomy; nearly disappeared within six weeks.

Dr. M. Storrs (reported by Dr. Coley). Spindle-celled sarcoma of axilla; disappeared in four months.

Dr. W. B. Johnson ('New York Med. Rec.,' November 17th, 1894). Male æt. 16. Spindle-celled sarcoma of palate. Injections of mixed toxins, mostly used from October, 1893, to June, 1894. In September, 1896, perfectly well.

Dr. Mynter ('New York Med. Rec.,' February 9th, 1895). Female æt. 12. Sarcoma of groin and abdomen, cystic, due to injury. Incised. Sloughing of tumour; ultimate recovery.

Mansell Moullin ('Trans. Med. Soc. Lond.,' 1897-8. Case 3 in monograph). Male æt. 28. ? Sarcoma of groin (iliac fossa) of large size, adherent to bone; enlarged glands. Injections from December 4th to February 8th.

Male æt. 48. Large (?) sarcomatous swelling in left side of abdomen. Injections from December 14th ($\frac{1}{2}$ minim) till January 24th (7 minims). Much swelling of tumour for a time. Ultimate cure.

Male æt. 38. Large sarcomatous tumour of hip; large glands. October 14th to 22nd, injections used. No recurrence a year later.



A CASE OF BRAIN ABSCESS.

BY RICHARD LAKE, F.R.C.S.,

ASSISTANT IN THE EAR DEPARTMENT; ASSISTANT SURGEON,
ROYAL EAR HOSPITAL.

C. H. D—, æt. 31.

History.—At the age of twelve he had pain and discharge from the left ear. The discharge with deafness has continued ever since. For some time patient has been failing in physical vigour; he is a man of high intellectual attainments; has latterly suffered from headaches, and mental work has been rather a strain to him.

On examination.—Right membrane normal; left meatus occupied by pus, lower two thirds of the membrane destroyed.

July, 1897. — Malleus and remains of left membrane removed under cocaine. The incus had evidently come away in the discharge, as it was not present. The result of this operation was disappointing, the discharge being unaltered in quantity.

January 9th, 1898.—Typical Stacke operation done on the mastoid; antrum deeply situated, the bone external to it much eburnated. Lateral sinus exposed during operation; it was superficial, coming forward nearly as far as the bony meatus. Bony roof of attic and antrum absent; these cavities carious and full of pus and granulations; dura over attic and antrum inflamed. The operation was completed and the dressings applied in the ordinary way. After the operation facial paralysis was noticed.

The convalescence was apparently satisfactory, and he left the house in which the operation on the mastoid had been done for home. On the tenth day his temperature was slightly above normal, and he complained of headache.

22nd.—There was loss of memory for names of places and people. Bowels constipated; tongue furred; pulse 100. Very giddy after the railway journey from Harrow. Great discharge of pus through meatus. Inability to read.

26th.—Patient much worse, intense headache, loss of memory for words complete. On this day he was sent to St. Thomas's Hospital; on the journey he had intense pain in the head, giddiness, and vomiting.

Condition on admission.—Well-built man complaining of severe pain in the head and discharge from left ear. He understands everything that is said to him, but on attempting to speak he shows some verbal amnesia, chiefly confined to nouns. He soon becomes weary of the effort, and is then so amnesic that his speech is unintelligible. When asked to read he is found to be able to read the Lord's Prayer aloud fairly well, only showing some slight confusion towards the end. When asked to read unfamiliar sentences he fails to pronounce many words, either stopping halfway through the word or substituting something different. He states that though he has read the paper the last few days he has gained no very clear impression of the contents. When asked to write his name he succeeds fairly well, but on attempting to write his address he cannot remember the number of the house, and the name of the road cannot be deciphered. Rough testing of the fields shows no hemianopia. Pupils moderately dilated, equal, reactions very sluggish; movements of left pupil more sluggish than right. The clasp of the hands is weak, but that of the right is weaker than the left, as is also the power of flexion of the right forearm. There is no difference in the power of the legs as tested by flexion of the joints, but the right knee-jerk is brisker than the left. There is no alteration in cutaneous sensation. Well-marked left facial palsy of peripheral type, and there seems some slight weakness of lower part of right face. Pulse 44, temp. 98° F. Through

the enlarged auditory meatus a great quantity of pus is pouring out, evidently from some large cavity.

Operation.—Chloroform having been given, Mr. Ballance reopened and extended the recent curved incision behind the pinna, the flap thus made being thrown forwards and downwards over the cheek. The region of the Stacke operation was thus exposed, as well as the portion of the squamous above the attic-antral cavities. A considerable quantity of pus was seen escaping through the roof of the attic. A circle of bone was removed with the trephine about one inch above the antrum. When the dura was opened the brain bulged into the trephine opening without pulsation. On palpation with the finger the site of the abscess could be distinctly felt. A quantity of foetid pus was evacuated through a cannula, the opening into the brain was then enlarged and the finger inserted. There was no thick wall to the abscess, showing that it was of the acute type. A bent probe, passed through the attic roof, entered the abscess. Three rubber tubes were used for drainage—two through the trephine opening and one through the attic. The pinna was not replaced. Antiseptic dressings were applied. At the close of the operation pulse was 65.

27th.—Amnesia; alexia more marked, he cannot read the Lord's Prayer; loss of power in right arm less marked. Pulse 72, temp. 99·6°.

28th.—Condition much the same; can write his name and read the Lord's Prayer, but he cannot write St. Thomas's Hospital or read anything in the daily paper.

31st.—Pulse 60, temp. 99·6°. During dressing tubes were removed, and were carefully washed and replaced.

February 1st.—Patient wrote his name and address well. He also read the words on the bed ticket except "dresser" and "treatment," which he said meant nothing to him.

2nd.—Pulse 56, temp. 97·4°. Power of reading improved; he seems to know when he is wrong, and often makes a second trial at pronouncing words. He says he recollects all about his work and the people associated with him, but that he cannot read names. He still makes some mistakes in writing from dictation.

5th.—Patient can now give a full account of his illness,

but he still has a difficulty in saying some words he desires to. General condition much better, appetite good. He tried to write a sentence of his own composition, and did well until he came to the word dinner, the spelling of which was a blank to him. He says he cannot recall the spelling by the sound of the word. Tube washed and slightly shortened.

21st.—Tubes in abscess removed.

23rd.—The patient has steadily improved in every way since last note. He is now seldom at a loss for a word. No difference in the strength of arms. No weakness of right face; the power of reading and writing has been almost completely regained, though occasionally some word bothers him.

28th.—The flap and auricle which had been turned down before were replaced.

March 7th.—Reading and writing are good, but his memory for words and the recalling of past events is often accompanied by effort.

10th.—Left the hospital.

July 1st.—For the facial paralysis following the Stacke operation the interrupted current was used; this is now completely cured. Patient is in robust health, and can bicycle and walk long distances. He has not yet attempted any mental work, and it is questionable whether it is advisable at present for him to undertake it.

Remarks.—The localising symptoms of abscess in the temporo-sphenoidal lobe are—

1. Paralysis on the side of the body opposite to the lesion—(a) of cortical type; (b) of internal capsule type.

2. Condition of pupil: a stabile pupil on the same side as the abscess.

3. Paralysis of the third nerve on the same side as the lesion.

4. Anæsthesia of the opposite side of the body when the paralysis is due to pressure on internal capsule.

5. Deafness of the opposite ear.

6. Aphasia if the abscess is on the left side of—(a) motor type; (b) sensory type.

7. Dream state.

The symptoms observed in the above case were pathognomonic of the site of the abscess. They were—

1. Slight right hemiplegia of cortical type, as evidenced by—(a) slight right facial palsy ; (b) weakness of right arm ; (c) right knee-jerk exaggerated.

2. Sluggish dilated pupil left side.

3. No anæsthesia, as paralysis was of cortical type.

4. Sensory aphasia, alexia, and agraphia. The condition of the opposite ear was not ascertained. .

As to treatment, the case shows the success attending efficient and long-continued drainage of abscess of the brain, and the value of the persistent use of the interrupted current in the cure of peripheral facial palsy.

NOTE ON THE TREATMENT
OF
CHRONIC DACRYO-CYSTITIS BY EXTIRPATION
OF THE LACRIMAL SAC.

By J. B. LAWFORD, F.R.C.S.,
OPHTHALMIC SURGEON TO THE HOSPITAL.

CASES of chronic inflammation of the lacrimal sac are often difficult and always troublesome to deal with. In the more common instances, in which the condition is secondary to partial obstruction of the nasal duct, treatment such as dilatation of the constricted canal by probing or the insertion of a style, and the application to the lacrimal sac, by syringing, of antiseptic solutions, *if these measures can be regularly and persistently carried out*, will in the majority of cases lead to cure, or at all events to marked amelioration of the symptoms. In a certain proportion of cases, however, such prolonged treatment is impracticable for various reasons. In young children and some timorous adults the use of lacrimal probes cannot be undertaken without the aid of a general anæsthetic,¹ and there are grave objections to the administration of a general anæsthetic, say twice a week for many weeks. Again, among hospital patients the

¹ The application of cocaine does not even diminish the pain of forcible dilatation of a strictured nasal duct.

expense and loss of time involved in coming every second or third day, perhaps from a considerable distance, precludes treatment being carried out with that regularity which is essential to success.

Hence it comes about that in a proportion of cases, how large I do not know, some method of treatment is called for which will give a reasonable chance of rapid and permanent relief.

The destruction or removal of the diseased lacrimal sac as applicable to such cases is the subject of this note.

I have heard it said, and I believe the opinion is held by some, that any operation for the removal of the lacrimal sac is a reproach to ophthalmic surgery, and should never be undertaken. This assertion may be true in theory; in practice, under our present conditions and with our present knowledge, I am sure it cannot be adhered to. Up to a certain point I am wholly in agreement with those who condemn this operative procedure. I do not think it should be adopted unless ordinary methods of treatment cannot be employed, or until they have failed; but then I think it would be wanton adherence to theory to decline to give trial to more radical measures.

The cases to which removal of the lacrimal sac is especially applicable fall naturally into two groups:

(1) Cases of chronic dacryo-cystitis (particularly in children) with or without complete obstruction of the nasal duct.

(2) Cases of congenital absence, impermeable stricture, or bony occlusion of the nasal duct, in which there is chronic catarrh of the lacrimal sac.¹

Apart from the constant overflow of tears, which is so troublesome a symptom in all forms of lacrimal obstruction, the abundant purulent or muco-purulent secretion from the lacrimal sac in dacryo-cystitis is a standing menace to the eye. The channel to the nasal cavity being obstructed, this secretion regurgitates through the canaliculi to the con-

¹ Dr. K. Scott (Cairo) has recently ('Annals of Ophthalmology,' July, 1897) reported a case of complete obliteration of the nasal duct successfully treated by drilling a new canal by means of a dental drill. This procedure might, I think, prove of great value in some cases of bony occlusion of the nasal duct.

junctional sac, where it sets up and keeps up a muco-purulent form of conjunctivitis. If, under these conditions, the corneal epithelium be damaged accidentally or by disease, the wound almost certainly becomes infected, and a destructive suppurative keratitis results.

Any operative procedure adopted for the removal of the source of infective material should have as its essential feature the extirpation of the lacrimal sac in its entirety, or the destruction *in situ* of the whole of its lining membrane. If this be only partially effected, secretion from the remaining portions of mucous membrane continues, and the symptoms persist though in lesser degree.

In my earlier cases I adopted the method of destruction of the mucous membrane of the lacrimal sac by cauterisation, using a Paquelin or electric cautery; but finding this unsatisfactory, for reasons to be presently mentioned, I employed the alternative plan of extirpation of the lacrimal sac. From such experience as I have had I believe the latter procedure to be decidedly the better.

The chief reasons which led me to relinquish the former operation were (1) the difficulty, almost the impossibility of ensuring the destruction of the whole of the secreting surface, so that in some instances the operation had to be repeated; and (2) the cicatrix in the region of the sac was undesirably noticeable, especially when the cautery was applied more than once. This was due to the unintentional cauterisation of the edges of the skin incision, which it was impossible wholly to prevent. In extirpation of the lacrimal sac these difficulties can be avoided.

The technique of the operation is briefly as follows:

The lower canaliculus is divided if this has not already been done; a bent probe, or preferably a squint hook, is passed into the lacrimal sac, and its point turned forwards and made to protrude the anterior wall of the sac and the skin over it.

An oblique incision is made over the sac; its upper end should be level with or slightly above the internal palpebral ligament, and from this point it should extend downwards and outwards about 2.5 cm. (The healthy lacrimal sac in the adult measures about 15 mm. in length.)

The wall of the sac is then exposed by dissection ; it is usually much thickened, and the surrounding tissue matted and difficult to separate. Care should be taken to avoid cutting into the sac, as this decidedly increases the difficulty of removal.

The lips of the wound are held apart by small retractors and careful dissection continued round the sac ; it is, I think, easier to begin on the nasal side, where the sac lies close to the bone. Having freed the lateral attachments of the sac, its lower end where it passes into the nasal duct is cut across, and then its connections at the upper end carefully dissected away. The upper part is the most difficult to deal with, and in removing it, unless great care be taken, the skin may easily be button-holed.

The cavity, after removal of the sac, is cleansed and (usually) the skin incision united by two or three stitches. If there has been much infiltration of the tissue round the sac, and a probability of some sloughing, the lower end of the incision may be utilised for drainage purposes. I have never employed a tube or other means of drainage.

From the cosmetic point of view it is important to obtain union by first intention, and in cases in which the sac is removed this is generally attainable. The resulting scar is small, and after the lapse of some months is scarcely noticeable.

The operation does not present any serious difficulties, but the very free hæmorrhage is troublesome. The region of the lacrimal sac is so vascular, especially when there has been prolonged inflammation, that copious bleeding occurs, and interferes considerably with the dissection necessary to separate the sac from its attachments. Unfortunately this hæmorrhage cannot be adequately controlled by pressure on arterial trunks, and frequent sponging is the only means of dealing with it.

The cavity left by removal of the lacrimal sac soon fills up, but a slight hollow (as compared with the opposite side) can usually be detected on examination. In a successful case there should be no evidence of any sac or pocket in which tears or mucus may lodge.

After operation, the conjunctivitis which resulted from

the regurgitation of muco-pus into the conjunctival sac rapidly disappears. Moreover—and this is a point of importance—the epiphora which was so troublesome a symptom is greatly relieved, and in some cases, if patients' statements can be credited, is wholly cured.

I do not intend to discuss the question or try to explain why, after removal of the lacrimal sac, which is an integral part of the excretory lacrimal apparatus, there should not be constant epiphora. I am convinced of the fact that in the class of cases under discussion epiphora is very much less after operation than it was before this treatment was adopted.

I have notes of twelve cases in which the lacrimal sac has been destroyed (three cases) or removed (nine cases).¹ These extend over a period of eleven years, an indication that the proportion of cases of dacryo-cystitis in which such operative measures have seemed to me advisable is very small.

Of the twelve cases, one was operated on, under my supervision, by my house surgeon at the time, the remainder by me.

Six of the number were children under twelve. Three were between the ages of twelve and twenty. The remaining three were aged twenty-eight, twenty-nine, and thirty-nine years respectively.

Cases 1, 2, and 3 were treated by cauterisation of the lacrimal sac (through an incision in its anterior wall). In Case 1 the operation had to be repeated twelve months later, and the ultimate result was satisfactory. In nine cases the sac was removed by dissection, but in one of these (that done by my house surgeon) the extirpation was incomplete, and a second operation was performed three years later, by which a small remnant of the sac was destroyed.

Of the twelve cases, two have been operated upon within the last three months, and one of these is still under observation (April, 1898). Two of the earlier cases (one adult, one child) have been recently seen, and the results three years after operation are very satisfactory. One case, re-

¹ In all these patients the disease was limited to one side.

ferred to above, was operated upon a second time twelve months ago, and has been seen since.

The remaining seven patients I have not been able to trace. They were under observation for a few weeks after the operation, and in all the condition was satisfactory at the time when their attendance at hospital ceased.

A CASE
OF
DIFFUSE CELLULITIS OF ORBIT
SECONDARY TO EMPYEMA OF AN ETHMOIDAL
AIR-CELL.

BY J. HERBERT FISHER, M.B., B.S.LOND.,
ASSISTANT OPHTHALMIC SURGEON.

CASES of orbital cellulitis set up by empyema of one of the ethmoidal air-cells appear to be so rare as to make it desirable that one recently under my care should be recorded. Orbital cellulitis itself is fortunately not a very common occurrence; in one year at the Royal London Ophthalmic Hospital, Moorfields, out of 12,692 patients seen, Spencer Watson found only four who attended on account of this disease, and was at very considerable trouble to find reports of thirty cases in the whole of the literature bearing on the subject. This investigation he conducted for an article in the 'Medical Mirror' many years ago. None of these thirty cases of cellulitis of orbit were attributed to disease of the ethmoidal air-sinuses, and it is interesting to note that at this time a considerable number were due to infection from pyæmia, originated in several instances by suppurating scalp wounds, or to facial

erysipelas. These conditions are no doubt less often met with as causes of orbital cellulitis at the present day.

George W. Caldwell, in the 'Medical Record' for April, 1893, p. 425, says, "Numerous cases are recorded of orbital periostitis and cellulitis from extension or infection from purulent ethmoiditis." This general statement I must say I have been unable to confirm. I have carefully examined the 'Roy. Lond. Ophth. Hosp. Reports,' the 'Transactions of the Ophthalmological Society,' and the 'Archives of Ophthalmology,' and I have failed to find any case in which it has been proved that a cellulitis of orbit has been set up by pus formation in an ethmoidal air-cell. Eales, in the 'Birmingham Medical Review,' vol. xvi, records several cases of acute cellulitis of orbit, in some of which such a cause seems likely, though he himself does not suggest it, and it was not proved either during life at the operation or in any fatal case at the autopsy. In the Moorfields Hospital 'Reports,' vol. xii, p. 281, Treacher Collins reports a case of suppuration in the orbit which proved fatal by cerebral complications; at the post-mortem examination pus was found in both the frontal and ethmoidal air-sinuses, but the cause of the cellulitis is attributed by him to acute periostitis of the roof of the orbit, the infection having been probably through a carious tooth: an area of necrosed bare bone in the orbital roof was found post mortem.

Knapp, in the 'Archives of Otology,' vol. xxii, p. 313, has an interesting article bearing on disease of the air-cells connected with the nose, and shows how they may become distended with serous fluid, with mucoid fluid, or with pus. He quotes in all seven cases. The first is one in which the ethmoidal cells became distended with serous fluid and caused proptosis and displacement of the eye; in the second a similar displacement was due to a mucocele of the ethmoidal cells; each of these was successfully treated by evacuating the contents through the orbit, and in the third case the fluid tapped by the same route was pus. The fourth and fifth cases were examples of combined distension of ethmoidal and sphenoidal air-sinuses, the fluid contained being purulent, and being reached as before along the inner wall of the orbit; in the fourth case a fistulous track

remained when the patient was seen three years later, and in the fifth a similar condition existed when seen four months after operation. The sixth case of Knapp's was similar to three recorded by Holmes in the 'Archives of Ophthalmology,' vol. xxv, p. 460, viz. empyema of the sphenoidal air-cell only. The seventh was one in which pus was found post mortem in all the air-sinuses in connection with the nose; the fatal result was due to purulent meningitis of both base and convexity of the fore-part of the brain; the communication had occurred through the cribriform plate and the orbital roof. This was the only case of the seven in which the patient had the general acute symptoms which we associate with orbital cellulitis; and even in this case, on which Knapp operated, he describes his operation as incising the skin near the inner canthus, enlarging the incision, laying bare the tumour which was causing the displacement of the globe, cutting into its wall, and evacuating pus. From this description it seems certain the pus was quite surrounded by a wall, and that this case was not one of diffuse orbital cellulitis; in the other cases there were no acute symptoms at all, and in each the operation consisted in dissecting along the inner wall of the orbit till the bulging outer wall of the ethmoidal cells was reached, and then opening the swelling. They are not in any sense cases of cellulitis of the retro-ocular tissue, and are recorded in the 'Archives of Otology;' the only interest to the ophthalmic surgeon was the operative procedure adopted, and the displacement of the eye to which, in each instance, the diseased air-cell gave rise. In the light of my own case, however, I suppose any one of them, if the outer limiting wall of the swelling had given way, would have rapidly been complicated with acute cellulitis of orbit.

A case of orbital cellulitis which probably was due to empyema of an ethmoidal air-cell is that of Schäffer, 'Prag. med. Wochenschrift,' 1883, No. 20; here pus was evacuated by incision through the lid, and in syringing it was found that the fluid passed into the nose; the patient died of meningitis. The primary cause of obstruction to the outlet of the ethmoidal cells involved appears to have been nothing more than an acute nasal catarrh.

Hartmann has recorded a case in which, after exophthalmos, a discharge of pus occurred from the nose; this flow of pus could be rendered more abundant by pressure on the eyeball: the globe receded, and recovery took place; no operation was necessary. It seems to me this must have been a case comparable to the third of Knapp's series; there was no infection of the retro-ocular tissue. Hartmann found the cause of the ethmoidal empyema was chronic hypertrophic rhinitis; the case is quoted by Berger and Tyrman, 'Die Krankheiten der Keilbein-Höhle und des Siebbein Labyrinthes,' Wiesbaden, 1886, p. 14.

Bosworth, in his 'Diseases of the Nose and Throat,' gives the following as causes of occlusion of the ostium ethmoidale in addition to those incidentally referred to above: syphilis and tubercle, affecting presumably either bone or mucous membrane; polypi, simple or malignant; very rarely traumatism; and as a possibility mentions phosphorus necrosis among those employed in match factories.

The diagnosis of distension of the sinuses in connection with the nose hardly comes within the scope of this article; from the point of view of the ophthalmic surgeon it may be well, however, to recollect the chief causes of conditions which may be responsible for the symptoms of a small proportion of those who complain of aching pain at the back of the eyes, and which in exceptional cases may give rise to displacement of the globe, and still more rarely to diffuse orbital cellulitis. An examination of the nose might occasionally enable a more accurate diagnosis than asthenopia to be made, explain a proptosis, or reveal the origin of an acute suppuration of the orbit.

It has been suggested that in some at least of the cases recorded of optic papillitis associated with the dropping of clear fluid from the nose, the source of such fluid is a dilated air-cell. I would point out, however, that the absence of nasal discharge does not exclude disease of the air-cells, obstruction to their communication with the nose in some form or other being the condition necessary for their distension with fluid, whether serous, mucoid, or purulent. As examples of ethmoidal distension when no nasal discharge existed we have one case recorded by Vermyne in the

'American Journal of Ophthalmology,' 1884, vol. i, No. 5, p. 129; another by Knapp at the Fifth Ophthalmological Congress, N.Y., 1876, p. 55; and one by Sonnenberg, 'Deutsche Zeitschrift für Chirurgie,' 1877, vol. vii, p. 500. When nasal discharge is present the next step towards an accurate diagnosis will be to determine from what air-cell it is coming. With fair accuracy the presence of turbid fluid in the maxillary antrum or frontal sinus can be recognised by the method of transillumination. If a posterior ethmoidal air-cell be the source of the fluid the discharge will be flowing over the convex side of the middle turbinate bone; in this case it will be likely to pass backwards through the posterior nares and be missed altogether. From the maxillary antrum, the frontal sinus, or a cell of the anterior ethmoidal group the secretion is discharged into the middle meatus of the nose, and escapes at the anterior nares; it is suggested that its flow will be more abundant when the head of the patient is lowered, or in the case of the antrum of Highmore laterally inclined. Discharge from a posterior ethmoidal cell is said to be most free when the head is held erect. Such observations concerning the influence of position on the amount of discharge must be difficult to make, and at all times somewhat uncertain. I have at the time of writing under my care a case of frontal empyema of the left side in which nasal discharge had previously come abundantly through the right nostril; presumably the left infundibular cells being occluded, a mucocele formed, and the septum between the two frontal sinuses being, as it often is, incomplete, the collection discharged into the nose by the only available route, viz. the right infundibular passage. When operating at another time on a case of frontal empyema, in endeavouring to pass a probe from the diseased sinus by which to draw a drainage-tube into the nose I was, for a moment, somewhat surprised to see the probe appear at the opposite nostril.

Knapp was able to operate on six cases of ethmoidal cell distension through the orbit, and in no case did emphysema result; and in the case I am about to relate of orbital cellulitis no emphysema existed, although this is almost an invariable result of fracture of the bony wall of any of the

air-sinuses surrounding the orbit. This seems to show that no patent communication with the nose exists in cases of ethmoidal cells distended sufficiently to give rise to displacement of the eyeball or to rupture so as to cause diffuse cellulitis of the orbit.

That more cases of orbital cellulitis, traceable to ethmoidal empyema, are not on record is the more remarkable when we recollect that the mucous lining of these cells in its deeper layers performs in addition the duties of a periosteum, and that its acute inflammation is consequently very prone to result in necrosis. Curiously, Vossius in v. Graefe's 'Archives,' vol. xxx, narrates a case where a retro-ocular abscess perforated into the ethmoidal cells and nose by necrosis of the os planum; it seems possible that this may really be a case analogous to my own.

Anatomical points, not yet incidentally alluded to, it may be well to recall. The frontal sinus and anterior ethmoidal cells are in direct communication, and the infundibulum opens into the middle meatus of the nose very close to the communication of the maxillary antrum with the same meatus. There is no communication between the larger group of anterior ethmoidal cells and the smaller group of posterior ethmoidal cells, but the latter set are often in direct continuity with the sphenoidal air-sinus. The lateral mass of the ethmoid bone does not begin to be excavated by cells till the fifth year after birth, and enlargement goes on for a considerable period after this date. The majority of Knapp's cases quoted above occurred at about the time of puberty or soon after, but some in middle life; there is of course no distal limit of age at which the air-sinuses may give rise to trouble.

Thomas C—, labourer, æt. 17, came to the Out-patient Department on August 9th, 1897. There was much brawny hard swelling and dusky red discoloration of the upper lid of the left eye; there was very great proptosis, the displacement of the globe being in a direction forwards, downwards, and slightly outwards; a small scar was observed at the inner end of the upper lid on the diseased side, where an abscess was said to have discharged on more than one occasion previously. The cornea was left partly

unprotected by the upper lid, and over this exposed portion its epithelium was slightly pitted and irregular. There was great œdema of the ocular conjunctiva as far as this membrane could be inspected. The pupil reacted to light. The preauricular lymphatic gland was enlarged and tender. The patient presented all the appearances of being acutely ill, and the pain was very severe; the temperature was raised to 100° F.

The history was extremely difficult to obtain; the boy's father, who came with him, though very willing to accept advice and give me a free hand for treatment, was absolutely incapable of giving me any account of the condition or of answering questions. The patient is very deaf indeed, and has had discharge from both ears on and off for five years, for which he has been treated in the Ear Department of the Hospital; the deafness has progressed till it is now very difficult to make him hear at all: he has also been subject to epileptic fits all his life.

The cause of his mother's death is unknown; his father enjoys good health. The patient is the fourth child of five living: three born since the patient have died in early life, —one of bronchitis, one who was born prematurely at the seventh month, and one died when six months old, the cause being unknown.

About three years ago the patient is said to have had a small discharging abscess in the left upper lid, which came and went several times without causing much inconvenience; it was unfortunately quite impossible to get further particulars of this trouble.

The boy had been in quite good health until his present illness commenced on August 6th, three days before I saw him; he had received no injury to the eye or lids, but was struck lightly on the cheek with a piece of firewood earlier in the day on which the swelling began; this blow had left no mark, and seems to have been altogether trivial.

The bridge of the nose is much depressed, the forehead square with prominent frontal bosses. The teeth, however, are not characteristic of inherited syphilis, though I suspected him to be the subject of this taint, and for the greater part of his stay in the ophthalmic ward he was taking antisypilitic remedies. The urine was normal.

He was at once admitted on August 9th, and the same afternoon ether was administered, and I incised deeply along the roof of the orbit through the upper lid; a large quantity of pus of rather an oily nature at once escaped; I opened up the collection more freely by expanding in it the blades of an artery forceps introduced closed along my incision; the cavity was explored with finger and probe; bone was felt, but not denuded or carious. A drainage-tube was left in, and cyanide dressing employed. The next day I had expected to find considerable change for the better both in the local and general condition, but was disappointed; though pus was coming freely through the drainage-tube there was no improvement. A purgative had acted well. I changed the dressing to one of hot boracic lotion every four hours.

On August 11th the discharge was noticed to be offensive; the eye was as much proptosed as ever, and its condition more serious in that the cornea where unprotected was now definitely ulcerated.

12th.—The lid looked likely to slough; there was no diminution in proptosis; offensive discharge was coming freely away from the tube; the ulcer of cornea was more extensive and yellow. The pulse was slow; the patient complained of severe pain in the head, though lying generally in a drowsy, lethargic state; the temperature had not fallen, but remained at about 100° F. I had ether again given, enlarged my incision, and scraped out some sloughing tissue; I slit vertically the upper lid in its whole thickness to relieve tension, a proceeding warmly advocated by Tweedy in such cases. I made incisions into the chemosed conjunctiva around the cornea, and a second opening into the orbit through the lower lid; this incision, however, did not reach pus, and none came through the tube which I inserted. I cleaned and replaced the original drainage-tube, which acted well.

Fuchs draws attention to the presence of symptoms usually regarded as cerebral in uncomplicated cases of cellulitis of orbit; when the cranial cavity and its contents are in no way involved these cases often show such symptoms as headache, vomiting, mental hebetude, and retardation of pulse.

The day following my second operation the temperature was 98·6° F., pulse 54; the eye slightly less prominent, and the swollen lids softer and pitting more easily on pressure. I examined the right optic disc, and was glad to find it quite healthy; it was not possible to get any view of the condition of the fundus of the left eye.

On August 14th a sinus had formed spontaneously from the depth of the orbit, with an orifice in the skin of the left upper lid near the internal canthus. This sinus continued to discharge abundantly; the proptosis gradually diminished; the purulent ulcer of cornea very slowly healed; the temperature remained normal, and the general condition improved until this boy became the most troublesome and unmanageable in the ward.

On August 17th I probed the spontaneously formed sinus; my note is—"A probe from the recently self-formed opening can be passed backwards for about $1\frac{1}{4}$ inches, and then appears to pass through a hole in the os planum of the ethmoid, which plate of bone feels as if it may be bulged towards the orbit; the probe is in contact with some bare grating bone on its outer side when passed through the supposed aperture, and one piece of this bone feels as if it were slightly moveable. A tube was introduced to-day to the bottom of the newly formed sinus."

The sinus gradually contracted, but on August 27th, as it gave no signs of completely healing, Mr. Lawford in my absence enlarged and explored it under an anæsthetic; he found it passed down to a surface of bare bone perforated by two or more holes into the ethmoidal cells; through one of these apertures a bent probe was passed into the nose, and brought out at the left nostril; by its means a rubber drainage-tube was drawn along the same route, and with lateral openings in it, its ends were left projecting at the nostril and the orifice of the sinus respectively.

From this time a considerable quantity of offensive pus passed by the tube and was discharged by the nostril, and so continued until the night of September 6th, the tube being kept clean and clear by syringing through it at each dressing.

On the morning of September 7th the tube was found to

be out, and had probably been withdrawn by the patient, who was constantly interfering with his dressings. From this date syringing was performed directly into the sinus in the upper lid. On one occasion this gave rise to slight bleeding from the left nostril, showing that a patent communication with the nose still existed; epistaxis also occurred slightly on two or three other occasions spontaneously from the same nostril during the week following the removal of the tube.

On October 4th the sinus went back as far as ever, and the probe still encountered bare bone at the end of it, and on October 7th all the fluid syringed into the orbital sinus came out through the mouth or left nostril.

On October 1st Mr. Ewen Stabb was kind enough to examine the nose for me in the Throat Department, and reported—"Both nostrils are blocked by hypertrophy of inferior and middle turbinate bones. No adenoids. Both antra free (by transillumination). Both frontal sinuses free also. Dead bone (extensive), inner wall of orbit."

After this report I again examined the right eye carefully for any further indication there of congenital syphilis, but could find none. Shortly after the patient was transferred to Clayton Ward, my idea being that it would be necessary to clear the nose before the orbital sinus would heal. Mr. Pitts, however, did not think this necessary, and his view was confirmed by the sinus closing soon after the patient left Clayton Ward. Mr. Pitts regarded the patient as having inherited syphilis, and he continued the course of iodide of potassium.

A good deal of deformity of lid resulted from the vertical division of it which I made at my second operation; the mucous membrane of the outer part everted and the lashes were displaced. This disfigurement I have since remedied by again dividing the lid and suturing it; probably this deformity would have been less marked and less troublesome to deal with if I had slit the lid as close as possible to the outer canthus.

I have very few remarks to add to those which I have already incidentally made in the early part of this paper in alluding to the various cases I have been able to find with

some bearing on my own. Thomas C— was throughout a case of great interest to me; and as I have not found another reported which seems quite analogous, I have thought it desirable to record it somewhat fully.

From the depth at which the communication between the orbital and nasal cavities was found, $1\frac{1}{4}$ inches from the orbital rim, I have no doubt this was a case in which the posterior ethmoidal group of cells was the seat of disease; that it was not one of the anterior ethmoidal set is confirmed, I think, by the fact that the frontal air-sinus was healthy. The cause of blocking of the ostium ethmoidale was no doubt the chronic hypertrophic rhinitis, which in turn was probably a manifestation of hereditary syphilis. I regret that the nebulous condition of the left cornea, which in its lower half is very slightly staphylomatous, prevents me from ascertaining what changes, if any, have taken place in the fundus of the eye on the affected side.



A CASE
OF
RUPTURE OF INTESTINE SUCCESSFULLY
TREATED BY ABDOMINAL SECTION;
WITH REMARKS ON THE EARLY DIAGNOSIS OF
ABDOMINAL INJURIES.

WITH BRIEF NOTES OF ILLUSTRATIVE CASES.

By BERNARD PITTS, M.C.,
SURGEON TO THE HOSPITAL.

THE object of this paper is to consider the symptoms presented by the different abdominal injuries, and to try and differentiate between cases which should be explored and those less clear cases in which judgment should be suspended. Trivial cases occur in which the immediate symptoms lessen and soon disappear. These apparently trivial cases, however, occasionally develop very serious symptoms a few hours or even days after the primary shock has passed off, and the patient is apparently out of danger.

These special difficulties in diagnosis can be best shown by illustrative cases, and brief reference will therefore be made to a number of cases besides the special one which suggested the paper.

It may be urged by some, when in doubt, open the abdomen and explore. A complete exploration for possible injury cannot, however, be done without some risk. An exploration, to be complete, must be thorough, and the whole intestinal tract investigated. Above all is it necessary to wait, whenever possible, until the effects of immediate shock have subsided. Shock as a symptom is not to be relied upon. It may be severe with a contused abdomen, and absent or slight when the injury is grave. The immediate question to determine is whether the shock is from hæmorrhage or of the nervous order. Pain as a symptom is rarely absent; it may be slight, but often very severe; it may be localised, and correspond to the seat of injury; but it may be insignificant or transitory in grave visceral lesion.

Vomiting, unless continued, does not help much as an early symptom; the vomited matter may contain blood in rupture of the stomach, but more often this symptom is absent, and may if present be caused by a bruised condition of the mucous membrane. Passage of blood by the bowel is occasionally present in rupture of intestine, but it is not a symptom of much importance.

In a certain proportion of cases of ruptured bowel and of injury to the mesentery tenesmus is a marked symptom, and is of importance when other symptoms of such a lesion are present. The writer can recollect several cases of ruptured bowel where constant straining to pass a motion was an immediate symptom; one case, indeed, died in the water-closet of the Casualty Department before he could be seen by the house surgeon.

Free gas in the peritoneal cavity obscuring the liver dulness—if present before great distension of the intestines has had time to occur—is an important sign of rupture of stomach or bowel, but frequently this sign is not present. Emphysema of the abdominal wall may take place when the lesion of bowel is behind the peritoneum—as in some part of the duodenum—and large intestine. The presence of free fluid in the abdominal cavity is of great importance, and can always be made out when hæmorrhage is taking place from a ruptured liver, spleen, or intra-peritoneal rupture of the kidney, or from a mesenteric rupture. The

condition of the patient will generally indicate the nature of the effusion, and distinguish it from the rupture of a full bladder—or the more localised escape of intestinal contents. Blood in the urine does not necessarily point to the bladder or kidney as the part most damaged, and may be caused by a bruise of either organ, when, perhaps, the main injury is a ruptured liver or spleen, &c. On the other hand, with a serious lesion of bladder or kidney, blood may be absent as a symptom. Rigidity of the abdominal walls and the diminution of respiratory abdominal movement are very important signs when present, and usually indicate something gravely wrong in the abdomen; these signs, however, may be slight or even absent, and may be marked in a nervous subject after a bruise of the abdominal wall. With this rigidity of the abdominal wall there is sometimes a little distension, sometimes a flattening or retraction of the belly, more particularly in rupture of the hollow viscera. Any person who has received an abdominal injury must be watched most closely, especially when the force has been of a character likely to produce a serious lesion, such as a kick, run over, or heavy fall or crush. Symptoms may arise most unexpectedly; the facial aspect, character of breathing, and above all the pulse must be watched constantly, as well as the condition of the abdomen. Increase of respirations and a rising pulse act as danger signals, when perhaps such signs as vomiting, abdominal pain, or altered temperature give little indication.

A description of how to examine a patient with supposed rupture of viscera, or how to form a differential diagnosis of the lesion, is not here necessary. In the more obvious cases there is not much difficulty in diagnosing between a ruptured liver, spleen, rupture of intestine or of bladder. In the less marked cases what we have to determine is the necessity for abdominal exploration, and the proper time to do it. No actual rules can be laid down; the surgeon must be guided by his experience and by careful observation of all the symptoms presented.

A farrier, æt. 37, was admitted to St. Thomas's Hospital, under the writer's care, at 1.30 p.m. April 24th, 1898. At

12.30 the patient was standing behind a horse, applying some ointment to it, when the horse lashed out and kicked him on the abdomen, first by the hock and then by the hoof, causing great pain, so that he was doubled up and broke out into a sweat. He was at once brought to the hospital in a cab.

On examination by the house surgeon, a healthy-looking man, complaining of pain in the abdomen midway between the umbilicus and pubes. The man's appearance was not that of one suffering from severe pain or shock, and he was able to stand up. He stated that he was more comfortable up than when lying down. On examination nothing abnormal was noticed in the appearance of the abdomen, but on palpation some tenderness over an area somewhat larger than the palm of a man's hand, just above the pubes and extending towards the left iliac region. Over this area the percussion note was impaired, but not absolutely dull. No dulness in the flanks; abdomen hard over tender area. The urine drawn off by catheter contained no blood. Pulse full and regular. Whilst waiting in the casualty room the patient vomited once, bringing up a small quantity of bile-stained fluid. At 4 p.m. the man was evidently suffering great pain, and lay in bed restless and groaning. He complained of difficulty in respiration, owing to the abdominal pain; he had vomited two or three times. The area of tenderness was greater, and the percussion note was quite dull. Warm antiseptic fomentations were applied. At 6 p.m. the condition was much the same, except that the pain had been greatly relieved by the fomentations. He was seen by the writer at 7, and he then expressed himself as feeling greatly better; his pulse was, however, increasing in frequency, and was over 100, and the abdomen was becoming more rigid.

On the condition being explained to him he at once consented to operation. Ether was administered and an incision made four inches long, commencing just below the umbilicus. At first inspection everything looked normal; no fluid was found in the dull area, but the intestine here was completely collapsed, and a number of pieces of half-digested food were found amongst the collapsed coils (he had taken a full meal two hours before the accident).

As the abdominal walls were very rigid, chloroform was

given in place of ether. The collapsed intestine was rapidly examined, and found coated with lymph in places. After a few feet had been examined an ecchymosis in the mesentery at its junction with the gut was found, and a little further on a lacerated perforation of the intestine large enough to admit the forefinger. This rupture was situated opposite the attachment to the mesentery, and the mucous membrane was slightly prolapsed. The perforation was in a distended portion of the gut, and, so far as could be ascertained, about the middle of the jejunum. The bowel opposite the lesion was full of half-digested food. The opening was closed by twelve Lembert's sutures, inserted in two rows, so as to bring the edges of the wound together in the direction of the gut, and thus interfere with its lumen as little as possible. The remainder of the intestines were examined, but no other lesion found. The abdominal cavity was very carefully cleansed with mounted marine sponges, but no irrigation was employed. The abdominal incision was then closed and drainage was not employed. The patient stood the operation well, and at 9.30 p.m. the pulse was 112; he was free from pain and quite comfortable. Rectal feeding was ordered, but at the end of twenty-four hours he was allowed small quantities of fluid by mouth.

Recovery was uninterrupted, and the man is now in good health and able to follow his occupation. Irrigation was not employed because the abdomen could be cleansed by gentle sponging, and drainage was also deemed unnecessary, and likely to set up intra-abdominal adhesions and to favour the development of ventral hernia. On opening the abdomen one was prepared to find extravasation of faecal matter or hæmorrhage at the dull area, but the absolute dulness present was accounted for by the large quantity of collapsed bowel. Not a trace of blood was noticed. We must remember, therefore, that localised dulness after abdominal injury does not necessarily mean extravasation of fluid or fæces.

Brief reference will now be made to a few cases under the writer's care, in which operation was not thought desirable.

A man æt. 30, after a heavy meal, was thrown down a flight of stairs, falling on his abdomen. He was violently sick, and brought up food mixed with blood.

On admission he was greatly collapsed, with cold extremities and feeble pulse. The upper portion of the abdomen was rigid, and he complained of great pain just above the umbilicus. During the next few hours he was sick several times, bringing up blood and mucus. There was no evidence of either free gas or fluid in the belly. The signs of severe shock gradually passed off, but for several days he continued to complain of abdominal pain and superficial tenderness. The stomach had no doubt been severely bruised.

A youth, whilst riding downhill on a bicycle, was pitched forward, falling on his abdomen. He stated that at the time of his injury he had a full bladder, and had not passed water for several hours, although he had taken considerable quantities of fluid at various places of call. (The weather was very hot.) Directly after the accident he vomited and suffered greatly from shock, and an intense desire to pass water.

On admission a few hours later he was still collapsed, and complained of great pain in the lower abdomen and a desire to micturate. A catheter was passed, and two ounces of very bloody urine drawn off. He was carefully examined for fracture of pelvis, and for free fluid in the abdominal cavity. In the absence of such free fluid he was not operated upon, and soon recovered. If his statement had been correct that his bladder was full at the time of the accident, and that he had not passed any water since, there would have been either free fluid in the abdominal cavity or signs of extra-peritoneal extravasation.

A boy æt. 8 was admitted to St. Thomas's Hospital, under the writer's care, shortly after being run over by a cab. There was a bruise across the lower abdomen, he was vomiting frequently, and suffering from severe shock. He had tenesmus and passage of dark blood and mucus. After a few hours, in spite of restoratives, his condition got distinctly

worse ; pulse became rapid and feeble, the abdomen distended, temperature subnormal, clammy sweat, and great pallor, with every indication of internal hæmorrhage. The bruising of the abdominal wall became very visible, but although the abdomen was dull there was no evidence of free fluid. His condition was far too bad for any operation, and he was treated with morphia and rectal feeding. The nurse reported that bright red blood came from the rectum when she gave the enema. The case was a very puzzling one, for the child, though very bad, seemed for several days to remain in about the same condition. Whilst leaving the hospital on the third day the writer met a youth he knew well as a "bleeder," and on asking him what he was doing at the hospital found that he was going to see his brother, who was the patient with abdominal injury. A sudden light was thus thrown on the case, and we knew that in consequence of the injury he had capillary hæmorrhage from mesentery and also within the intestines, and that the bright blood from the rectum was no doubt from a slight abrasion caused by the nozzle of the enema syringe. The boy recovered after a long illness, but died several years later from hæmorrhage from an abscess cavity. The elder brother died at the age of twenty-one from cerebral hæmorrhage.

A girl æt. 10 years was under the writer's care in 1890 at Great Ormond Street Hospital for Children, with a hydatid cyst of the upper and posterior part of the right lobe of the liver. The cyst was opened by the thoracic route through the diaphragm. She progressed favorably, and in ten days was quite convalescent except for a sinus which led to the contracted cavity, and which discharged a little pus. Whilst washing this cavity out with boracic solution the girl suddenly cried out "Oh, my stomach !" and became at once greatly collapsed. Dilating forceps were introduced into the sinus, and two ounces of blood-stained fluid was returned, and a drainage-tube was then inserted the length of the sinus, viz. three inches. The child lay with her knees drawn up, and immediately vomited.

On examination two hours later some of the signs of immediate shock had passed off, but there was dulness in

the flanks, and the temperature had risen to 101°. Resp. 40 and pulse 120; expression of face anxious, complaining still of great pain and abdominal tenderness. The question of abdominal exploration was carefully considered, but decided against, since it did not seem worth while to open the abdomen for the escaped boracic fluid, and the rent in the liver would be difficult to find and still more difficult to close. During the next twenty-four hours she was sick five or six times, and was put on rectal feeding and small doses of morphia hypodermically. The general condition gradually improved, but the abdomen during the next two or three days became distended and tympanitic, with well-marked dulness in the flanks and just above the pubes. The fluid was gradually absorbed, and recovery, though slow, was complete. The case is an interesting one from many points, since one was able to watch from the first the effects produced by the leakage from the liver abscess. It would be easy to multiply cases of abdominal injury in which the advisability of non-interference was proved by the result. Unfortunately in giving illustrative cases of abdominal exploration several of the cases show the dangers of delay, and the great difficulty sometimes attending a sufficiently early diagnosis.

The following case illustrates well the occasional latency of symptoms, and consequent difficulty of diagnosis.

John G—, æt. 52, a horsekeeper, was admitted on September 10th, 1897, under the care of my colleague, Mr. Anderson. On Tuesday, September 7th, he came home and complained that he had fallen down, and another man had fallen on his abdomen. He walked to the hospital and was examined. The house surgeon could find no sign of any injury or even shock, and told the man (who was slightly alcoholic) to go home and keep quiet, and return to the hospital if he felt worse. That night he slept well, but the next day, feeling uncomfortable in his inside, he was given castor oil by his friends, but without effect. The following afternoon he began to be sick, and the sickness continued through the day, but otherwise he felt pretty comfortable. Three and a half days after the accident he

again applied at the hospital, and his abdomen was found to be distended and rigid, not moving with respiration. There was no localised tenderness or dulness. The abdomen was tympanitic all over. He had a double inguinal hernia: that on the right side was doughy, irreducible, and feeling like omentum; the left hernia was tense and also irreducible. A median abdominal incision was at once performed, and two traumatic perforations found in the small bowel near the junction with the cæcum. Some extravasated faecal matter lying near the perforations was removed, and the apertures sutured. Irrigation with warm saline fluid was employed to cleanse the abdominal cavity, and a glass drainage-tube inserted. The patient died the following day.

Post-mortem.—General peritonitis, no free fluid. The rents in intestine were about an inch long, and situate nine and six inches respectively from the cæcum, the upper one transverse and the lower longitudinal in direction. The house surgeon's statement that on the first examination there was no sign of visceral lesion is quite credible, but the case shows with what respect any traumatism complained of about the abdomen should be treated. If the patient had come into hospital and been under constant observation, no doubt some indications would have been afforded at a sufficiently early period to give a fair chance of relief.

Specimen 1010 in the Hospital Museum shows a portion of intestine from a man æt. 21, who died twenty-seven hours after being kicked by a horse. For half an hour after the kick he was unable to move, and then he resumed his occupation as a labourer, and continued at it for the remainder of the afternoon. He walked home, and in the evening was sick and restless, and was admitted to the hospital the next morning in a dying condition. The rent in the bowel involved about half its circumference.

The following case is one of rupture of the duodenum at its posterior part, where it is uncovered by peritoneum.

Ebenezer D—, æt. 19, was admitted to St. Thomas's Hospital on April 13th, 1897. He had been thrown out of a van

and a wheel had passed over the upper part of his abdomen.

On admission the patient was very restless and complained of great pain. He had some signs of shock but no sickness. The abdominal wall was emphysematous, and the abdomen distended and tympanitic, the liver dulness being obscured. Mr. Abbott, the resident assistant surgeon, opened the abdomen above the umbilicus, and found free gas in its cavity, and the mesentery of the bowel was full of gas, resembling lung in consistence. The ascending colon was full of blood, but no sign of perforation could be found in any part of the intestinal tract. The abdomen was closed and the patient died the next day. At the post-mortem, to the left of the median incision a parietal peritoneal rent was found two inches long. The scrotum was full of gas, and collapsed on pricking. The abdominal walls were crepitant. On opening the duodenum a rent was discovered about two and a half inches from the pylorus, on its posterior non-peritoneal surface. The rent was half an inch long. The retro-peritoneal tissue was very black and full of gas, but there was no faecal extravasation. No doubt the gas escaping from the duodenum into the retro-peritoneal tissue found its way into the abdominal wall, and so round to the rent in the abdominal parietal peritoneum, and thence into the abdominal cavity, and thence along the inguinal canal into the scrotum. The case was a very puzzling one at the time of the exploration. Emphysema of the abdominal wall can only occur with post-peritoneal ruptures, and one would have to carefully eliminate fracture of rib and wounded lung as the cause.

It is remarkable that large herniæ do not more often suffer from injury. A very unusual case came under the writer's care in 1880.

A woman æt. 50, with a right femoral irreducible hernia of the size of a child's head, was going upstairs to bed, when she had a violent attack of sneezing, and suddenly the coverings of the hernia ruptured. She was brought up to the hospital in a cab, suffering from great shock, and on examination it was found that the cæcum, with three or four

feet of small intestine and a large quantity of omentum, had escaped, and were lying amongst her underclothes. After carefully washing the parts the intestines were returned and the omentum removed, and a radical cure of the hernia by the removal of the sac and redundant skin was then done. She made a good recovery. Some years before the accident she had been operated upon for strangulation of the hernia, and the rent took place at the junction of the cicatrix with the sound skin.

In 1895 a man was brought to St. Thomas's Hospital who had been run over the left inguinal region by a cart, the course of the wheel being marked by grazing of the skin. He had tenderness in the inguinal region and upper part of the left thigh. A left inguinal hernia was found, which just protruded into the scrotum and seemed to contain some flaccid bowel. The abdomen was soft, and the patient expressed himself as comfortable when lying still. He was examined again the following morning, and nothing worthy of note was found. Towards evening he vomited the contents of his stomach, and rapidly grew worse; the left inguinal region was rigid, with some dulness in the left flank which did not shift. Abdominal section revealed a rupture of small bowel about three quarters of an inch long in the free border of intestine.

The hernial sac was found to be empty but contused. Death took place a few hours later. The ruptured bowel was lying close to the entrance of the hernial sac, and it is very probable that the rupture took place in the sac.

The chief signs of RUPTURED MESENTERY are shock followed by collapse due to hæmorrhage, and increasing evidence of free fluid in the abdominal cavity. The violence is usually a crush or gliding force, such as a wheel passing over the abdomen, and generally the injury is at a lower level than in cases of damage to liver or spleen.

Two cases came under the writer's care in 1896.

A man æt. 50 was admitted to St. Thomas's Hospital on January 4th, 1896, with marks of bruising on the left side of thorax and abdomen from being run over by a van. His

case was marked by great collapse; pulse too rapid to be counted; evidence of free fluid in the abdominal cavity; fixed dulness over the left lower thoracic region. The patient was extremely restless, demanding the use of the bed-pan, but unable to pass anything. He was infused with three pints of saline fluid but did not rally, and died shortly after admission.

Post-mortem.—Four pints of blood were found in the abdominal cavity. The spleen and liver were undamaged. A number of large rents were found in the mesentery of the small bowel. Some of the rents were large enough to admit one's hand. Fracture of the fifth and sixth ribs on the left side near the cartilages, with half a pint of blood in the left pleural cavity. From the position of the injury and increase of dulness in the splenic area, as well as from the signs of hæmorrhage, one confidently expected to find a rupture of the spleen.

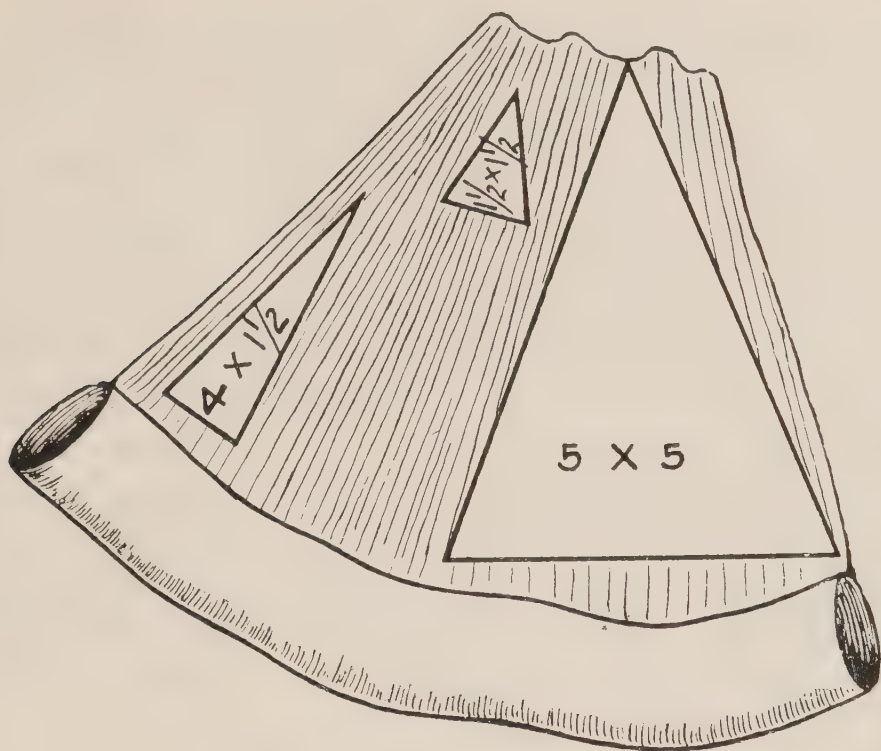
David T—, æt. 50, railway porter, was admitted under the writer's care March 2nd, 1896, with injury by crush of abdomen between two buffers, one on the lower part of abdomen, and the other behind.

On admission patient was conscious, complaining of great pain in the lower abdomen, much shock, pale and cold, pulse weak. No signs of bruising. The right side of abdomen was rigid, resonant except for small area in the left inguinal region. Patient got rapidly worse, and area of dulness increased. Abdominal section was made a few hours after admission, and a large quantity of blood evacuated. Three large mesenteric rents were found, and a number of bleeding vessels secured.

The chief rents were as shown by diagram, and were united by a number of silk sutures.

The patient was then infused with 68 ounces of saline with 2 ounces of brandy. His condition through the night was satisfactory, but he relapsed the next morning, and died twenty-two hours after operation.

Post-mortem.—The mesentery corresponding to last two feet of ileum with rents as shown. One of the rents extended to attachment to spine. Mesentery much thick-



ened by blood effusion. Two or three ounces of blood in the peritoneal cavity. Part of the ileum supplied by injured mesentery of deep red tint. At one spot opposite to mesenteric attachment a pale area in intestine, where sloughing was already commencing.

We know that each portion of bowel is dependent upon the mesentery immediately belonging to it for its nutrition, so that in ruptured mesentery we have not only the danger of hæmorrhage, but also the prospect of gangrene. If possible in this case one would have resected at least two feet of intestine on account of the mesenteric damage, but the man's condition would not permit of this, and it was hoped, as the rents were vertical and well brought together, and did not extend quite to the free edge of the intestine, that gangrene might not ensue. The writer has twice made such vertical rents in mesentery whilst removing pancreatic cysts, taking care that the rent did not extend to the intestine. No bad result followed the surgical procedure.

In writing this short paper the cases have been selected to illustrate intestinal injuries, and lesions of the liver and spleen have been excluded.

A full account of splenic injuries and their treatment will be found in a joint paper by the writer and Mr. Ballance, in the 'Transactions of the Clinical Society,' vol. xxix.

Nineteen years ago, when resident assistant surgeon at St. Thomas's Hospital, the writer read a paper on the treatment of Abdominal Injuries before the Medical and Physical Society of the Hospital. This paper dwelt on the gloomy past in abdominal surgery, and on the then brightening future. It pointed out the necessity for early interference, and how this must be governed by early diagnosis, and that then alone success might follow the efforts of the surgeon.

During the last few years the first successful case of abdominal section for ruptured intestine has been recorded by Mr. Croft ; of ruptured bladder by Sir W. MacCormac ; and the first successful removal of a ruptured spleen in Great Britain by Mr. Ballance.

The question of the advisability of interference in a particular case is even now often a difficult problem, and it is in the hope that a record of these cases may be of some assistance that they are now narrated.

SOME OBSERVATIONS

ON

INTRA-PERITONEAL SUPPURATION IN
THE UPPER HALF OF THE ABDOMEN.

By C. R. BOX, M.D., B.S., B.Sc.LOND., F.R.C.S., M.R.C.P.,
RESIDENT ASSISTANT PHYSICIAN;

AND

A. E. RUSSELL, M.D., B.S.LOND.,
MEDICAL REGISTRAR.

It is only within comparatively recent years that the pathological anatomy of the intra-peritoneal complications of such affections as appendicitis, gastric ulcer, intestinal ulcer, etc., has been investigated. The acknowledged difficulty attending the early diagnosis of these purulent intra-peritoneal extensions, the conflict of opinion as to the best method of localisation and treatment, and particularly the mortality attendant upon these conditions when unrelieved by prompt surgical measures, have led us to think that a consideration of a few of the cases which have occurred in the practice of this hospital would be of interest.

We use the term intra-peritoneal advisedly, as notwithstanding the opinion of many writers that the class of

suppuration to which we are about to refer is, if anything, more commonly extra-peritoneal, yet during the course of our observations, both in the operating theatre and the post-mortem room, we have seen nothing to indicate that the extension of suppuration was not intra-peritoneal. We must not be understood by this to infer that extra-peritoneal extension never occurs, but only that the other form is by far the more common. It is now commonly accepted that the most frequent cause of the type of intra-peritoneal suppuration we are now considering is disease of the vermiform appendix, and it is in those cases especially in which the appendix is directed upwards, by the side of or behind the cæcum, or is lying coiled upon it, that an upward extension of the suppuration is prone to occur. The direct track by which suppuration extends from the region of the appendix to the upper part of the abdomen appears to be along the line of the ascending colon. Its extension in this direction is much assisted by the configuration of the posterior part of the abdominal cavity in this situation, for both on the right and left sides, with the patient supine, a more or less distinct well exists near the head of the kidney, into which purulent extensions gravitate. If the inflammation extended in the retro-peritoneal tissue we should expect to find evidence of pus in the lumbar region, or if subdiaphragmatic we should expect it to be confined to that part of the dorsum of the liver uncovered by peritoneum; whereas it is uncommon to find a lumbar abscess as the result of appendicitis, and pus above the liver is commonly found over the whole of the upper surface of its right lobe, and therefore within the peritoneal cavity.

It can be stated with confidence that in the majority of cases an accurate diagnosis of intra-peritoneal extension of the suppuration can be arrived at by a careful consideration of the history and physical signs. Without discussing these in any detail, we may mention that the signs at the base of the lung are of paramount importance, and these are in the main those of pleural effusion of moderate extent, the signs being due to the raising of the diaphragm by the collection of pus between it and the liver. We have repeatedly found a dull percussion note as high as or even higher than

the angle of the scapula, and this in the absence of any pleural effusion. In one case where an actual measurement was taken, a line passing horizontally through the thorax from left to right, just touching the highest point of the diaphragm, hit the fifth rib in the right mid-axillary line, the lower portion of the right lung being compressed, and no pleural effusion being present.¹ Thus the signs in these cases of a limited and stationary pleural effusion are strongly suggestive of a subdiaphragmatic abscess, with either no pleural effusion or with, what is so common, an obliterative basal pleurisy. Of course in some instances empyema is actually present, as in Case 3 recorded below.

Pain referred to the right shoulder is also, we believe, an important sign of the upward extension of suppuration to the region of the liver.

As regards the condition of the abdomen; the immobility of the diaphragm on the affected side is a matter of common observation, and the movements of the lower ribs are markedly curtailed. The liver is usually depressed, and its edge may be felt sometimes as much as two inches below the costal margin. A distinct bulging of the lower part of the thorax is sometimes noticeable.

The mass in the right iliac fossa is usually easily palpable, and between it and the costal margin there may be either a definite thickening or merely resistance with tenderness; in some cases absolute dulness obtains over the whole of the right side of the abdomen, as was well shown in Case 4.

I. *Perforative appendicitis; extension of infection along ascending colon to the upper surface of right lobe of liver; subdiaphragmatic abscess; death.*

CASE 1.—C. S—, admitted September 17th, died September 19th, 1897. Two weeks before admission he had been suddenly seized with severe pain in the right iliac fossa associated with vomiting and constipation. He had not improved, and two days before admission fourteen ounces

¹ For this measurement we are indebted to Dr. Hawkins.

of offensive pus had been drawn off through one of the lower right intercostal spaces.

On admission there was on palpation a feeling as if a hard cord extended upwards from the right iliac fossa towards the right costal margin. The edge of the liver could be felt two inches below the costal margin; the upper limit of liver dulness commenced at the fourth rib in the nipple line, and there were signs of fluid in the right chest from the level of the angle of the scapula to the base. On the following day a portion of rib was resected and the pleural cavity opened; this, however, being found to be uninvolved it was decided to postpone further operation until pleural adhesions had formed sufficient to shut off the pleural cavity when the diaphragm should be incised; this decision was the more readily arrived at as so large an amount of pus had been removed before admission to the hospital. On the next evening, however, the boy was seized with sudden dyspnœa and restlessness, and died.

Post-mortem.—The edge of the liver was adherent to the abdominal wall and to the adjacent coils of small intestine; there was a large abscess cavity containing offensive yellow pus between the right lobe of the liver and the diaphragm. There were numerous adhesions in the region of the appendix, which was situated behind the cæcum; it contained a fæcal concretion, and its terminal quarter of an inch was almost separated by ulceration. From the appendix a suppurating track led up outside the ascending colon to the right lobe of the liver. There was a very small localised cavity above the diaphragm. The lung was compressed, but there was no infection of the pleural cavity.

The case illustrates well the ordinary features of these cases; the unfortunate termination is difficult to explain; at the time of death it seemed natural to suppose that the abscess had communicated with a bronchus, and that the pus had flooded one or both lungs; this, however, was not so, the lungs at the post-mortem examination showing no evidence of such an event.

II. *Perforation and gangrene of vermiform appendix ; extension of infection along outer side and front of ascending colon to hepatic flexure ; collection of inflammatory fluid below liver and around head of right kidney ; operations and recovery.*

Another and more obscure variety of suppuration, in connection with appendicitis, is that in which the pus collects around the hepatic flexure of the colon and the right kidney. The track of infection in these cases again appears to be along the course of the ascending colon, mainly on the outer side, but also in front. In cases of this variety the physical signs are naturally more obscure, owing to the deep situation of the purulent collection. In the instance which follows, although the collection of fluid was limited to the under surface of the liver, and there was only a very slight fibrinous deposit on the upper surface of that organ, yet in addition to right-sided abdominal rigidity and tenderness the signs of fluid were present at the base of the right lung. These signs very rapidly disappeared after operation, and the boy made an uninterrupted recovery. Although, therefore, it cannot be positively stated that no pleural effusion was present, yet it appears more likely that the signs were due to upward displacement of the liver and inaction of the diaphragm.

CASE 2.—A. M—, male, æt. 18 years, admitted January 21st, 1898, discharged March 19th, 1898. This patient first noticed abdominal pain on January 19th. The onset was not very sudden, and the pain gradually extended all over the belly. There was no vomiting. On the day following the onset the pain localised itself in the right iliac fossa.

On admission his temperature was 102° F., and his tongue furred. The abdomen was tense, only the upper part showing respiratory movements, and these were very slight. The right iliac region was extremely rigid and tender ; and there a considerable mass could be felt. On exploration the next day, this mass was found to correspond to a localised abscess, in the midst of which lay a gangrenous appendix. The gangrenous portion was excised, leaving behind the two adherent ends, and a drainage-tube inserted in the abscess cavity.

The day after the operation the temperature was 100° F., the pulse 127, and the respirations 34. There was occasional cough, and small quantities of purulent sputum were expectorated. The right side of the chest was dull from the fourth rib downwards in front, and from the level of the scapula behind. Over the dull area the breath-sounds were diminished, and the voice-sounds ægophonic. The right flank was dull and resistant. On the following day the belly was again explored. The former incision being extended upwards, a track was found along the course of the ascending colon. An oblique incision, extending downwards and inwards for about four inches, was then made below the costal margin on the right side. A collection of turbid fluid was thus evacuated from between the hepatic flexure of the colon, the head of the right kidney, and the under surface of the liver. A slight fibrinous deposit on the upper surface of the liver also came into view. On the next day the patient was found cyanosed, the temperature was 101·4° F., bubbling crepitations were heard over both lungs, and the discharge from the wound was extremely offensive. Contrary to expectation he rallied, and ultimately left the hospital quite cured.

The incision mentioned above divided the right rectus abdominis, and allowed a remarkably good view of the hepatic flexure and the under surface of the liver. We believe that there is no objection to an incision of this sort in the *upper* part of the belly, the risk of subsequent hernia here being very slight. The track of the inflammation was seen to be along the outer aspect of the ascending colon, and then across the hepatic flexure anteriorly.

III. *Appendicitis and pelvic abscess; extension upwards of infection with formation of adhesions between right lobe of liver and diaphragm; localised empyema at base of right lung; operations and recovery.*

CASE 3.—G. B—, male, æt. 16 years, admitted March 15th, discharged July 10th, 1898. His illness began four weeks before admission with abdominal pain which gradually in-

creased in severity, and he took to his bed ten days before admission.

On admission the abdomen was very rigid, especially in its lower part, and there was a swelling in the right iliac and supra-pubic regions not unlike an over-distended bladder. Temp. 102° F. On the day following an incision was made in the right iliac fossa, and a pint of very offensive pus, mixed with faecal matter, was evacuated from an abscess situated mainly in the pelvis behind the bladder; the appendix was thought to be the origin of the abscess, but it was not seen at the time of the operation. Temporary improvement followed the operation, and the wound discharged very freely, but after a week the temperature began to rise every evening to $102\text{--}103^{\circ}$ F., and the discharge was at times very foul. A parotid bubo formed on the left side, and was opened on April 6th. The boy frequently complained of abdominal pain, and this was especially marked on palpation over the right kidney region. On April 7th he complained of pain in the left lower thorax, and a friction rub was audible in the left axilla; dulness also was present at the base of the left lung. On April 8th he coughed up several ounces of very offensive muco-purulent sputum, and began to complain of considerable pain in the right shoulder. By April 14th signs of fluid had become obvious in the right pleura; hepatic dulness commenced at the level of the fifth rib in the nipple line, and at the sixth in the mid-axillary line; there was friction in the right axilla, and breath-sounds and vocal fremitus were diminished over the dull area anteriorly and posteriorly.

On April 16th the abdomen was explored by an incision under the right costal margin, and dense adhesions were found on the upper and under surfaces of the liver; no pus, however, was discovered. Not much relief followed the operation; the temperature rose every evening, and the boy wasted considerably; there was still occasional abdominal pain, but the wounds progressed well, and the discharge from the first wound became insignificant. The physical signs at the base of the right lung persisted, and slight oedema was noticed low down at the side of the chest.

On May 25th he was again explored, and a portion of the

tenth rib being excised in the posterior part of the axilla, foul pus was evacuated from what was supposed to be a localised empyema. After the operation the temperature fell to normal, and a complete and rapid recovery ensued.

There are several points of interest in the above case. In the first place it can be reasonably assumed that the abscess originated in disease of the appendix; the fact that the main collection was in the pelvis does not militate against this view. No doubt the majority of cases of pelvic abscess following appendicitis are due to an appendix so situated as to hang over the pelvic brim; but inasmuch as there was a history of four weeks of illness before admission to hospital, the pus had abundance of time in which to find its way into the pelvis, whatever had been the original situation of the appendix. The occurrence of an attack of parotitis was of no special import; suppuration occurred as is so frequently the case when this condition complicates abdominal affections.

The chief interest of the case centres in the fact that complete relief did not follow the first operation; after a partial respite the temperature rose, and the boy's general condition deteriorated; the presence of a foul and varying discharge at first seemed sufficient to account for this, but the attacks of abdominal pain between the right iliac fossa and the costal margin, coupled with the signs at the base of the right lung, and the pain in the right shoulder, were suggestive of a subdiaphragmatic abscess. The exploration of April 16th, although confirming the upward extension of the suppuration, was followed by no improvement; his temperature showed a marked evening rise to about 102° F., and later to 103°, with a morning minimum of about 99°—100°. This and the persistence of the physical signs at the right base could only be explained by the presence of pus, and the operation of May 25th led to complete relief and rapid convalescence. It is to be noted that there were signs at the left base early in April, and at that time he coughed up several ounces of offensive sputum—whether a collection of pus in the left pleura discharged through the left lung, or whether it came from the lung or was merely bronchitic, it is impossible to say.

The lesson of the case appears to be that it is only by careful watching of those cases which do not at once improve, and by repeated operation, that a successful result can be attained.

IV. *Appendicitis ; extension upwards of infection ; recovery without operation.*

CASE 4.—W. S—, male, æt. 15 years, admitted May 5th, discharged July 3rd, 1898. His illness began a fortnight before admission, with vomiting and pain in the right iliac fossa ; a week later he took to bed ; during the first week his bowels were freely opened.

On admission the right side of the abdomen was obviously distended and moved very slightly on respiration ; there was extreme tenderness in the right iliac fossa, but no mass was palpable, owing to the great rigidity. The movements of the lower right thorax were markedly impaired, the costal margin scarcely moving, while on the left side the costal margin made considerable upward and downward movements. On percussion there was absolute dulness from Poupart's ligament to the level of the fifth rib in the nipple line ; this dulness was present over the entire right side of the abdomen, and was limited almost accurately by the mid-abdominal line. In the thorax, resonance was impaired at the level of the angle of the scapula on the right side, with complete dulness two inches lower ; anteriorly dulness commenced at the fifth rib in the nipple line ; over the dull area breath-sounds were very faint. Temp. 102·4° F. His tongue though furred was moist. After a few days the tenderness and rigidity diminished, and a definite mass remained palpable in the right iliac fossa. He remained on the Medical side for a month, and during that time the physical signs in the abdomen and in the thorax diminished, and the temperature chart showed a gradual improvement, though it was not until the third week that even the morning temperature reached normal, and there was still a constant evening rise. He was then transferred to the Surgical side and the right iliac fossa explored. A small quantity of pus (about a drachm) was

evacuated; dense adhesions were present, and the appendix was not seen. He left the hospital cured.

This case is interesting, inasmuch as although there were the ordinary signs of an upward extension of the suppuration, yet a cure resulted without any exploration of the upper abdomen. That such extension actually occurred is beyond question, and that the signs all cleared up is explicable when we consider the appearances presented by those cases which have come to the post-mortem room; for the inflammation along the outer side of the ascending colon is generally of an adhesive and plastic character rather than a free suppuration, and there is no obvious reason why a similar condition should not be present on either the upper or the lower surface of the liver, instead of a collection of fluid pus, and, in fact, we may find a thin fibrinous sheeting on the upper surface of the liver as in Case 2, or a thick layer of lymph as is not uncommonly met with after death, and so on up to a large purulent collection. The later effects of such plastic inflammation would be the formation of dense adhesions such as were met with in Case 3.

The dulness at the base of the lung would be explained partly by the thickness of the layer of lymph and partly by the limitation of costal and diaphragmatic movements which would naturally follow the inflammation of the serous surface; this limitation of movement itself from insufficient expansion of the base of the lung would account for some impairment of resonance at the base of the lung, for even in health deep respiratory movements make an appreciable difference in the lower limit of pulmonary resonance.

The varying clinical types met with will then obviously depend upon the type of inflammation present, whether plastic or purulent. The fact that all gradations may be met with, from a few scattered adhesions between the liver and diaphragm to a large collection of pus, will make it equally obvious that the advisability or otherwise of operative interference will in some cases be a question of great difficulty, and it must be borne in mind that it is possible, even when actual fluid pus is present, for cure to result without surgical interference. In the days when operation

for appendicitis was an uncommon event, cases occurred in which actual œdema of the skin over the hepatic area was present, and recovery ensued without operation; and this is quite in accordance with the course which pus occasionally pursues in other parts of the body. It is seldom, however, that any ill effect would result from an exploration, while the unfortunate termination of Case 1 illustrates the harm that may accrue from delay.

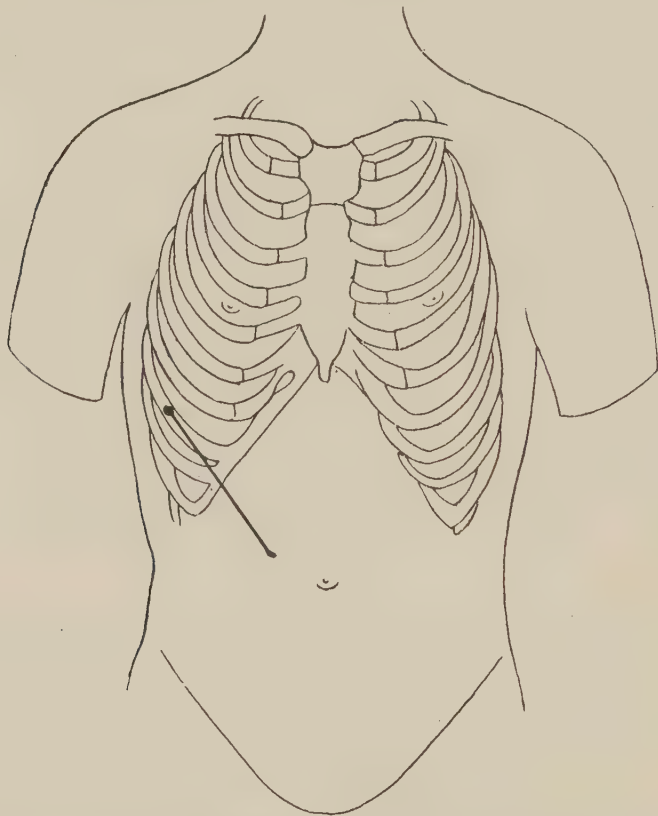
In one case which proved fatal there was a racemose pyæmic abscess in the liver in addition to a localised abscess situated between the right lobe of the liver, the kidney, and the chest wall, the latter abscess having arisen by the usual extension along the outer side of the ascending colon, along which position there was abundant evidence of old inflammation at the post-mortem examination. That the abscess within the liver was pyæmic in origin was proved, not only by its racemose character, but also by the fact that a branch of the portal vein communicated directly with the abscess. The occurrence of portal infection, of course, renders the prognosis much less hopeful.

Suppuration around the spleen and splenic flexure of the colon will give rise on the left side to signs similar to those produced by abscess above the liver on the right. The left-sided collections appear to be more common in connection with perforated gastric ulcer, and in such cases the physical signs are apt to be modified by the presence of gas in addition to fluid, with the formation of the so-called pyopneumothorax subphrenicus. An anatomical feature aiding the retention of the purulent collection in this situation is the presence of the costo-colic fold.

In the localisation of these collections, or rather these infected areas in the neighbourhood of the liver, whether on the right or left side, we have been much impressed by the uselessness of the exploring needle or aspirator. Such exploration may, and no doubt does, yield good results when dealing with collections in the pleural sac, but fails frequently when applied to collections such as we are considering, the reason being that often the collection is little more than a layer of so-called plastic lymph through which the needle readily passes. It is also obvious that the use of the

exploring needle in the lower liver region is not free from risk. Again, as actually happened in a case of sub-diaphragmatic abscess complicating gastric ulcer, the needle may pass right through the pleural sac and diaphragm, and tap a collection of pus really abdominal.

It seems, then, that the most rational treatment is to explore by surgical incision. When pus is suspected on the right side in the region of the liver, and whether it may be pleural or between the diaphragm and liver, or under the liver and around the base of the right kidney, an oblique incision of some length, lying partly over the ribs in the axillary region and partly over the belly dividing the rectus muscles, will allow in its lower portion of a free examination of both upper and lower surfaces of the liver, and by a subsequent excision of rib by a prolongation of the same incision the pleura can be explored if necessary.



Incision suggested for exploring for collections of pus above or below the liver.

It was found by experiments in the post-mortem room, and confirmed subsequently in the operating theatre, that resection of several inches of the sixth or seventh rib in the

left axilla allowed of a thorough exploration of the external and antero-internal surfaces of the spleen, of the liver as far as the falciform ligament, of the anterior surface of the stomach, and of the left side of the vault of the diaphragm. The pleura, of course, can be stitched off. It is also quite possible to drain by this route a collection of pus in the lesser sac of the peritoneum.

We are much indebted to the members of the staff under whose care these cases were admitted for permission to use them for the purposes of this paper.

THREE ABDOMINAL CASES.

BY H. G. TURNEY, M.D.,

ASSISTANT PHYSICIAN,

AND

C. A. BALLANCE, M.S.,

ASSISTANT SURGEON.

CASE 1. *Pancreatic cyst simulating calculous obstruction of bile-ducts.*—George R—, æt. 35. Admitted August 20th, 1897. Waiter by occupation.

Family history of no interest.

Previous history.—When he was about twenty-one he was laid up for about four months with “congestion of the lungs.” Had fairly good health up till about two years ago, when he was laid up for a fortnight with pain in the upper part of the abdomen. The pain was chiefly on the right side, and the doctor told him that he had “gastric catarrh and windy colic.” He has since then several times suffered from attacks of pain in the right side and between the shoulders, with nausea but not actual vomiting. These attacks would last for several days at a time. He generally used to drink about three and a half pints of beer a day, and some wine in addition. Of late he has had morning nausea but no

vomiting; he has never been much of a breakfast eater. There is no history of syphilis.

Present illness.—About July 24th of this year patient had a severe griping pain in the upper part of the abdomen. A doctor told him that he had a chill on the liver, and he went home to bed. The next day he saw the doctor again, who told him that he had got jaundice, and he himself saw that his skin was yellow. He remained in bed about a fortnight without much pain, but feeling as if he had wind round his stomach. Since then he has been at the seaside, and on his return was advised by the doctor to come up to the hospital. He noticed the swelling in his stomach about a month ago; he does not think that it has increased in size. He has lost a little flesh of late.

On examination.—Patient is a rather poorly-nourished man with a marked yellow tint of skin and conjunctivæ.

Abdomen.—There is no general distension, but immediately above and to the right of the umbilicus a distinct prominence is visible, such as might be produced if the parietes were thrust outwards by a spherical body, the size of a walnut. This can be seen to move with respiration, though not very freely.

The liver dulness commences above at the sixth rib and extends downwards for some three inches below the costal arch, becoming continuous with the note over the swelling just described. On palpation there is no tenderness either in the hepatic region or elsewhere in the abdomen. Beneath the protuberance of the abdominal wall a hemispherical body can be felt with tense elastic walls through which a sense of fluctuation can be obtained. From either side of this the lower border of the liver appears to slant upwards without any breach of continuity to the costal margin; on both sides, but particularly on the mesial aspect, this border feels firm and rounded, but palpation is difficult, as the abdominal walls are somewhat tense and the organ gives the impression of lying rather deeply. There is no enlargement of spleen and no ascites; in fact, in every other respect the abdomen is perfectly healthy.

There is no sign of disease in the thoracic organs. The pulse is strong, regular, and at the rate of 70 per minute.

The temperature is normal. The urine has a specific gravity of 1020; it contains bile pigments as shown by Gmelin's test, but neither albumen nor sugar.

August 29th.—The icteric tint of skin is less, and there is now no bile in urine.

September 7th.—Since admission no change has occurred, except that the jaundice has practically disappeared, though there are still at times traces of bile in the urine.

Operation.—An incision was made in the upper part of the right linea semilunaris. The liver proved to be of normal size, and the gall-bladder perfectly healthy and hidden underneath the liver margin. Not only the part described as the tumour but also that which was taken to be the liver itself proved to be one and the same thing—a fluid swelling coming from the back of the abdomen and from behind the stomach. The pyloric end of the stomach is just lifted forwards by the right portion of the tumour. At first an attempt was made to open the cyst between colon and stomach, but this was found difficult as the short distance intervening between these viscera was occupied by numerous large veins. Finally the swelling was reached by reflecting the colon and great omentum upwards, and then incising it through the transverse mesocolon. The cyst proved to have a smooth lining membrane, and to be full of a thick chocolate-coloured fluid. The cyst wall could not be enucleated, so the opening was stitched to the abdominal incision and drainage-tubes were inserted. During convalescence the skin around the wound was much irritated by the fluid escaping from the cyst. The tubes were removed in three weeks, and the wound was healed completely in six weeks. A chemical examination of the cyst fluid showed that it had all the properties of pancreatic secretion, containing albumoses and peptones, having a strongly alkaline reaction, and an amylolytic and tryptic ferment.

It will have been gathered from the preceding account that no doubt was felt as to the nature of the affection. The history of repeated attacks of severe pain localised in the right hypochondrium and accompanied by nausea and jaundice seemed to point with hardly a possibility of error to the presence and passage of biliary calculi. The character

of the tumour itself seemed to be confirmatory of this diagnosis, but in looking back on the case some points may be noticed which, though they were observed at the time, did not receive all the attention that they merited.

(1) The distinct protrusion of the parietes by the tumour. This rarely, if ever, occurs with simple distension of the gall-bladder, and its presence should have suggested a possible origin from the back of the abdomen.

(2) No line of demarcation could be made out between the part of the swelling which was taken to be the gall-bladder and that deeper portion which was supposed to be the liver. The gall-bladder formed, as it were, the rounded apex of a triangle having its base deeper in the abdominal cavity. But this absence of anything like a pedicle, so far as clinical examination is concerned, is not unusual, especially where the tenseness of the abdominal walls makes palpation difficult, as it certainly was in this case. Moreover, as is well known, a distended gall-bladder not infrequently drags down a prolongation of the liver with it in its descent, and then only a rounded tip may appear, as in the present case. The absence of a palpable pedicle cannot, therefore, be considered to have much weight against the diagnosis adopted.

If only the simple expedient of inflating the stomach had been adopted, the difficulties would have at once disappeared, and the correct diagnosis must have been arrived at simply by a process of exclusion. The flattened-out pylorus was spread over the anterior surface of the cyst, and must have become obvious by this method of examination.

In discussing the case from the point of view of pancreatic disease, two unusual features call for comment—the position of the cyst and the presence of jaundice. First as to the position of the cyst. The variety of situations in which it may come to the surface forms one of the most remarkable characteristics of a cyst of the pancreas. In the course of its development it may follow any of the folds of peritoneum which lie within its reach; in this way, separating the layers of the transverse mesocolon, it may appear between colon and stomach or below the former viscus; or, on the other hand, it may instead enter between the layers of the mesentery, and so come

to the surface in the lower part of the abdomen. At other times a path is chosen straight forwards from behind the stomach, a sub-variety of which is shown by the present case. But wherever the cyst appears, it is, as a rule, on the left side of the abdomen rather than the right, and at or below the level of the umbilicus rather than above it. Certainly its appearance on the right side immediately below the liver is one of its most exceptional manifestations, and to this exceptional position is added another puzzling quality—the movement of the cyst with respiration.

Jaundice is not an uncommon symptom in pancreatic disease, but the paroxysmal type which was seen here is rare, and its presence contributed materially to the error in diagnosis. The combination of physical signs and symptoms pointing to biliary calculus is striking even in retrospect, but it must be again acknowledged that a correct conclusion was not impossible.

CASE 2. *Carcinoma of stomach ; gastro-jejunostomy.*—Hannah B—, æt. 46. Admitted August 21st, 1897. Discharged December 17th, 1897.

Family history.—Nothing of importance.

Previous history.—Patient had fairly good health till about two years ago, when she suffered from influenza, and from that time her health has never been the same. She has drunk about two pints of beer daily, with spirits occasionally. Appetite has been poor for many years past. She has had ten children with two miscarriages.

History of present illness.—In the early part of 1896 she first began to complain of pains in the abdomen and between the shoulders. She was occasionally sick, the vomiting occurring soon after food. The material brought up was jelly-like and dark brown in colour, but did not appear to contain blood. The vomiting continued till about a month ago, and latterly took place after every meal. During the last two years she has lost a great deal of weight, but does not know how much. She used to be a very stout woman.

On examination.—Patient is an emaciated woman, looking a great deal more than her age. Her weight is six stone six pounds.

The abdomen is flat, or rather retracted, except in the epigastrium ; respiratory movements are free, and there are no signs of ascites. The liver dulness comes two inches below the right costal margin, and at that level its edge can be distinctly felt. It is tender and feels slightly irregular. Immediately below the lower border of the liver an irregular sausage-shaped mass can be felt, a little to the right of the middle line and slightly above the umbilicus. It is quite distinct from the liver, though it undergoes respiratory movements with it. It is fairly moveable and very tender. Its character and position are suggestive of a carcinomatous pylorus with some displacement downwards. The outline of the stomach is not visible and no splashing can be elicited.

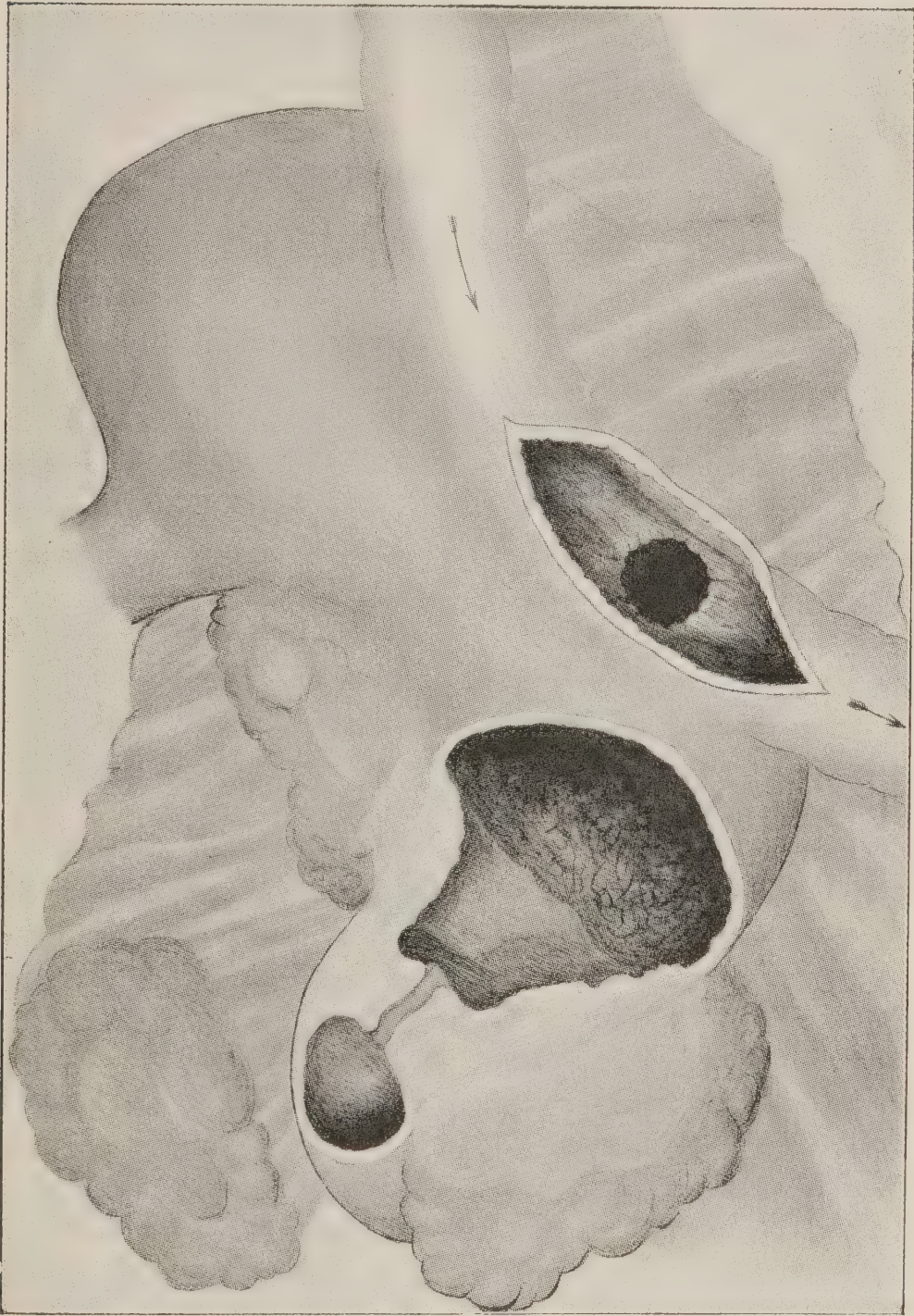
The spleen cannot be felt. The kidneys are also indistinguishable. There are no signs of disease in either heart or lungs.

The muscles of arms and legs are tender on pressure. Sensation is not affected in any other respect, and reflexes, both superficial and deep, are normal. The urine is clear, its reaction acid, the sp. gr. 1010, and it contains neither albumen nor sugar.

After her admission the patient's main symptom was pain referred to the upper part of the abdomen. This was very severe in character, and required the administration of opiates. It was never accompanied by visible peristalsis nor gurgling, and this raised some doubt as to its precise cause, whether obstructive or not. The appetite was very bad, and at times patient retched a good deal, with occasional regurgitation of small quantities of food in an unaltered condition. Attempts to pass a stomach-tube were quite fruitless on account of the extreme irritability of the patient, and so the investigation into her condition was defective and unsatisfactory. During the six weeks that elapsed before the operation was performed patient lost five pounds in weight and showed marked failure in strength.

In discussing the diagnosis, no doubt could be felt that the stomach was the organ affected, and that the disease was carcinomatous in nature. The chief question that had to be decided was whether there was actual obstruction of the

pylorus, and if the pain depended upon that. If so, then an operation would be justifiable, or rather called for, in spite of the evident impossibility of removing the growth and



Carcinoma of pylorus involving lesser curvature and glands in transverse fissure. Gastro-jejunostomy by Halstead's method. Size of opening at death 18 mm. x 15 mm. (Half natural size.)

of the probable presence of secondary deposits in the liver. The character of the vomiting and the absence of indications of dilatation of the stomach were both in favour of the growth

affecting some other part of the organ than the pylorus ; and, indeed, the position and character of the tumour itself were quite compatible with carcinoma of the greater curvature. On the other hand, the severity and persistence of the pain were both, to say the least of it, unusual unless there was obstruction, and it was mainly on this ground that it was finally decided to recommend an operation. This was performed by one of us on October 2nd.

Operation.—A lengthy incision was made in the middle line above the umbilicus. It was then at once found that, though the stomach was not dilated, there was a considerable pyloric tumour, and that many glands were involved in the transverse fissure of the liver. This precluded any idea of extirpation, and it was accordingly determined to unite a portion of the intestine to the stomach so as to relieve the pain of obstruction. The junction of the duodenum and jejunum was found at the inner border of the left kidney. The jejunum was then brought over the front of the stomach from left to right and united by Halsted's method obliquely to its front wall. A considerable opening was made between stomach and jejunum, a portion of the wall of each being cut away so as to prevent the contraction of the orifice which has been reported as occurring in several cases. The operation was then completed in the ordinary way.

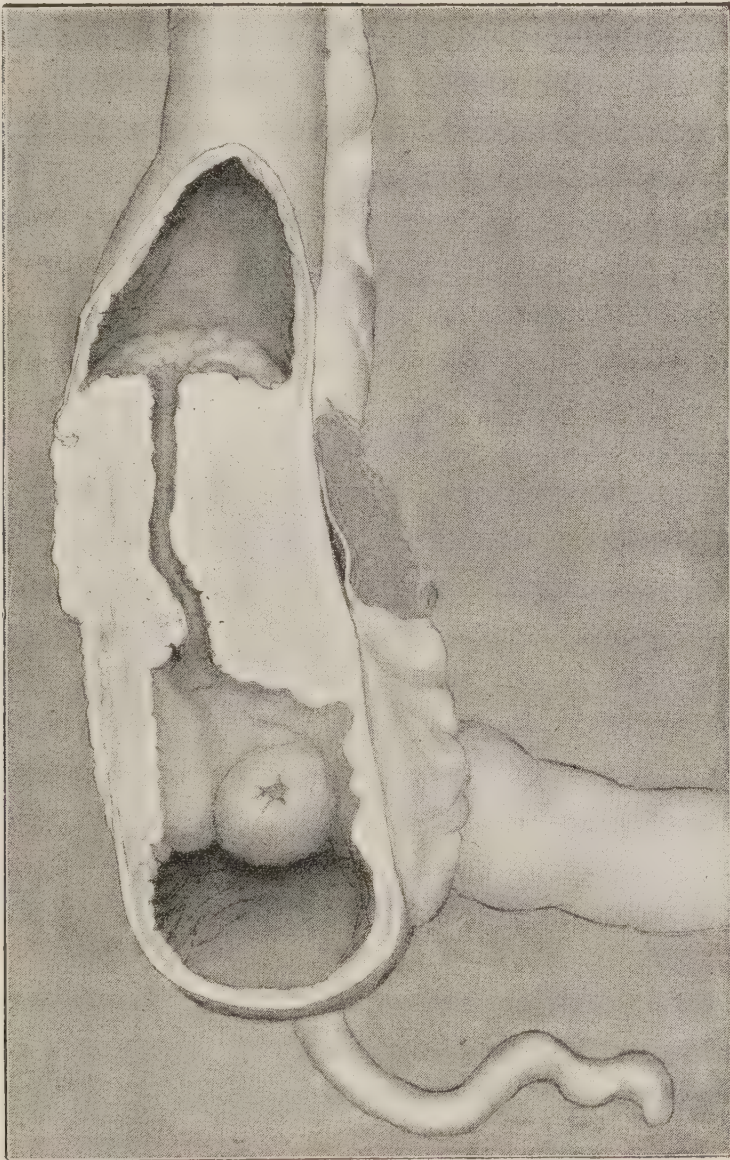
No detailed account of the patient's progress after the operation is necessary. From the extensive nature of the disease no startling improvement in the general condition was to be expected, but during the remainder of her stay in the hospital and afterwards the patient was relieved from the sufferings which had previously made her lot one of the greatest misery. She repeatedly expressed her satisfaction at the change in her condition up to the time of her discharge on December 17th, 1897. She died in Lambeth Infirmary on January 2nd, 1898, under the care of Dr. Quarry, to whom we are indebted for the opportunity of examining the stomach after death.

The accompanying figure shows the extensive nature of the disease around the pylorus, along the lesser curvature of the stomach, and in the transverse fissure of the liver. It also shows the extreme narrowing of the channel between the

stomach and duodenum, and the free communication established by the anastomosis, the aperture of which measures 18 mm. by 15 mm.

CASE 3. *Carcinoma of cæcum*.—J. S—, male, æt. 43, harness-maker, was admitted into St. Thomas's Hospital on September 16th, 1897.

FIG. 1.



Carcinoma of cæcum. Observe the narrow channel in the growth and the almost complete closure of the ileo-cæcal opening. (Half natural size.)

The *family* and *previous* histories were good.
The *present illness* commenced five months ago with an

attack of diarrhoea and sickness. He had another similar attack five weeks ago, and since then he has only been able to keep down fluids and soft foods. Weakness has gradually supervened, and for four or five months he has noticed a lump in the belly on the right side. Much flesh has been lost lately, and the motions are always soft, but no blood or mucus has been noticed mixed with them.

On examination an elongated irregular moveable mass is felt on the right side of the abdomen in the cæcal region. It is not tender, but is irregular in outline and of stony hardness. The abdominal wall is flat and thin like the rest of the body, and there is no evidence of any distension of intestine. All other organs appear healthy.

First operation (September 17th).—A long incision was made over the tumour in the right linea semilunaris. The growth was then seen to be a malignant tumour of the cæcum and ascending colon. It was adherent at one spot to the parietal peritoneum, and here the growth had perforated the cæcal wall. Several infected glands could be felt in the mesentery. The ileum, 3 inches above the ileo-cæcal valve, was clamped and divided, and the junction of the ascending and transverse colon was treated in the same way. The cæcum, ascending colon, and mesentery, with infected glands, were now cut away and a considerable portion of parietal peritoneum was removed around the spot where the tumour had perforated the cæcum and was adherent to the abdominal wall. The patient's condition did not now admit of the continuance of the operation, so glass tubes were tied into the colon and ileum, and the wound was rapidly closed.

The growth of the cæcum (see Fig. 1) on examination was found to involve the whole of the organ, leaving only a very small lumen. The ileo-cæcal valve was nearly closed by the growth. Water passed through the bowel in a small dribble when introduced into the ileum under considerable pressure.

There is nothing of importance to record in the convalescence of patient from above operation.

Second operation (October 30th).—An incision was made in the upper part of the left linea semilunaris. The lower end

of the ileum was then discovered and united by Halstead's method of lateral anastomosis to the transverse colon (see Fig. 2). It was carefully arranged that at the anastomosis the peristaltic movement of ileum and colon should be in the same direction.

The patient recovered rapidly from this operation, and soon fæces began to appear through the colon-anus, showing that the anastomosis was working; moreover, enemata sometimes returned in part through the ileum-anus. About every other day a small natural motion passed.

Third operation (December 17th).—As the two anuses showed no signs of closing by atrophy, an incision was made in the median line, and the portion of intestine leading to the ileum-anus was excised, leaving only sufficient gut in the neighbourhood of the anastomosis for inversion and suture. Thus the whole contents of the small intestine were made to pass into the transverse colon, and it was thought that the colon-anus would now probably atrophy, it being unlikely that it would long continue to give passage to fæces travelling against peristalsis. This hope was not realised, and on January 8th a fourth operation was undertaken.

Fourth operation (January 8th, 1898) (see Fig. 3).—The colon-anus was freed from the abdominal wall, inverted, and sutured. During the operation an opportunity presented itself of examining the anastomosis. It was found to readily admit two fingers.

The patient now rapidly improved, put on flesh, and said that he had not felt so well for two years. The natural action of the bowels was quite satisfactory by January 24th, and on January 31st he went home.

Patient was readmitted in April with symptoms of obstruction. He had been well till a week before, when he had pain in the abdomen, vomiting, and distension of the belly.

Fifth operation (April 13th).—An incision was made in the median line, and on opening the abdomen the whole peritoneal surface, visceral and parietal, was found studded with small nodules of carcinoma. Many coils of intestine were adherent, and several were greatly distended. One of the distended coils was opened and sutured to the wound.

The patient was put back to bed as soon as possible. Death occurred on May 16th.

FIG. 2.

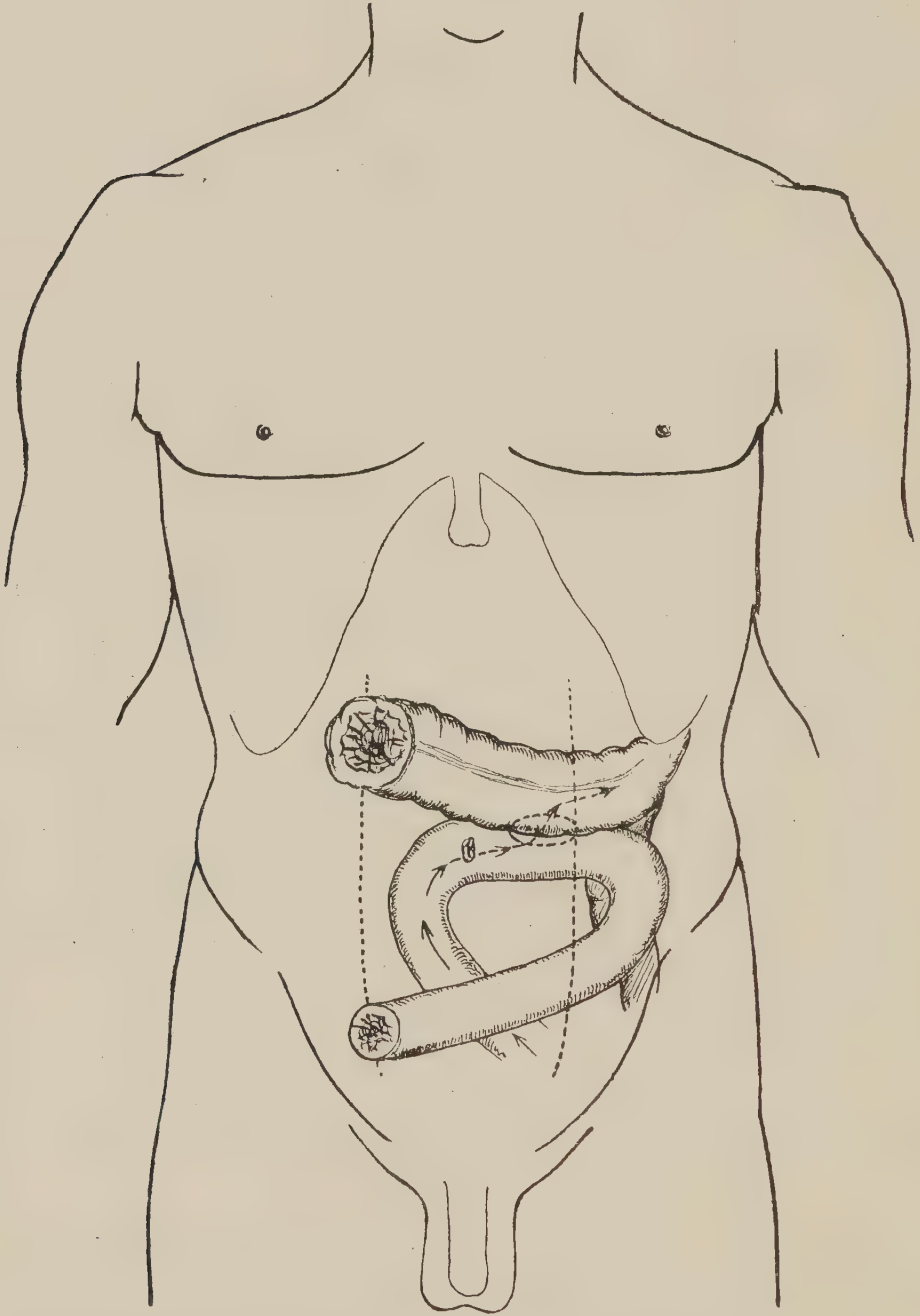


Diagram illustrating the second operation. The attachment of the colon and ileum to the abdominal wall at the close of the first operation is shown, as is also the anastomosis performed at the second operation. It will be seen that the ileum is so arranged at the anastomosis that the flow in it is in the same direction as in the colon.

Remarks.—The prognosis of carcinoma of the cæcum when operation is carried out at an early stage is good, for no

recurrence may take place (compare case in 'Trans. Clin. Soc.,' vol. xxvii, reported by Mr. Edmunds). In our patient the involvement of numerous lymphatic glands in the

FIG. 3.

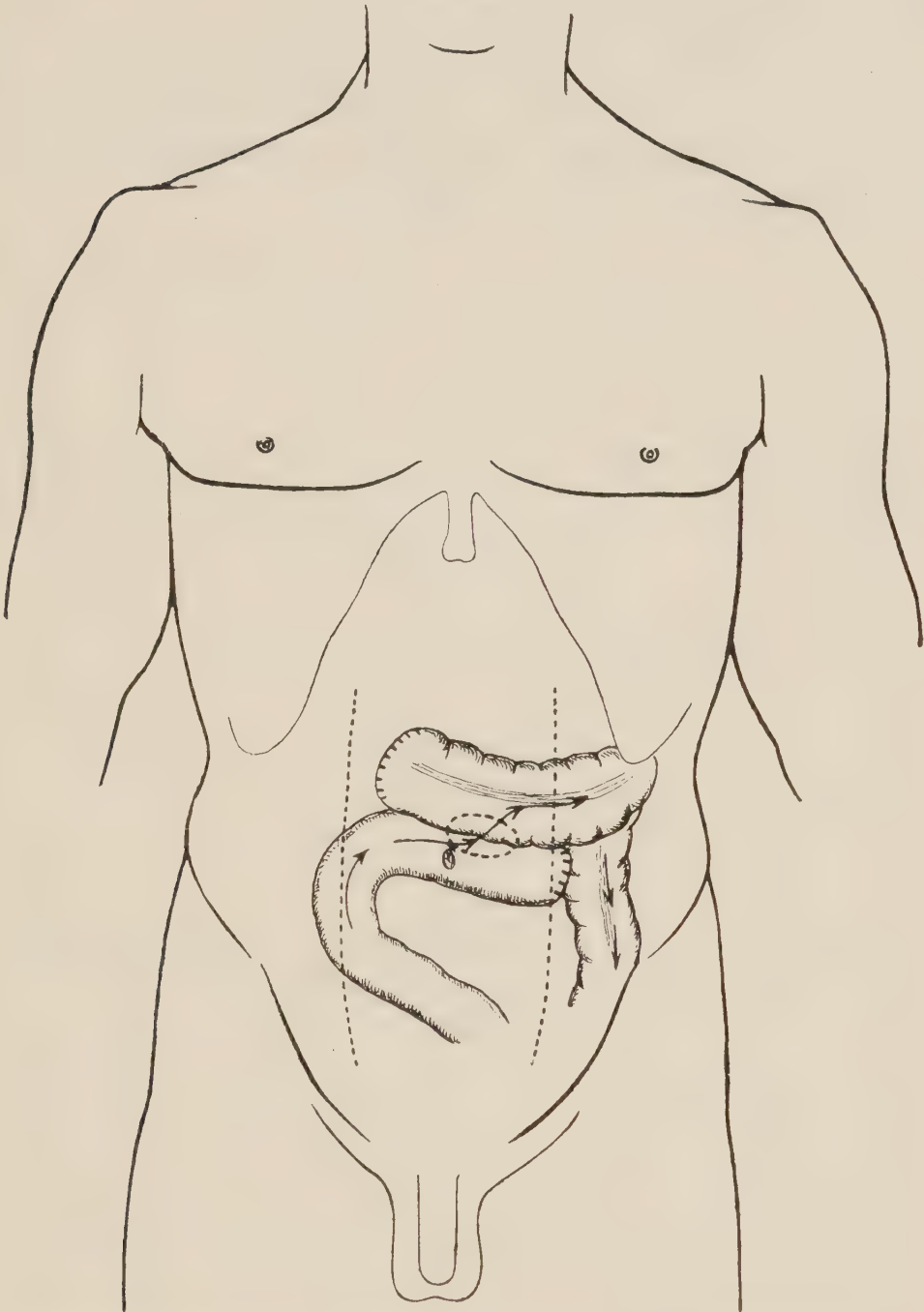


Diagram illustrating third and fourth operations. The anastomosis is now free in the abdominal cavity.

mesentery, and especially the perforation of the cæcum by the carcinoma and its adherence to the parietal wall, precluded the hope of such a favorable result.

The general infection of the peritoneum, found seven months after the removal of the primary tumour, must, we take it, have occurred previous to its excision; it would appear, indeed, that already infective particles or the seeds of the disease had been scattered broadcast through the length and breadth of the belly cavity.

The case illustrates the safety of performing certain great operations in stages, and is remarkable in that, though the ileo-cæcal communication was almost completely blocked, yet the small intestine was not distended.

TABULAR STATEMENT
OF
INTESTINAL SUTURE AT ST. THOMAS'S
HOSPITAL

for the Years 1888 to 1897,

WITH REMARKS.

BY CUTHBERT S. WALLACE, B.S.LOND., F.R.C.S.,
RESIDENT ASSISTANT SURGEON.

Small Gut.

No.	Initials.	Year.	Sex.	Age.	Duration.	Diagnosis, history, &c.	State of bowel at operation.
1	J. G.	1889	M.	35	3 days	<i>Strangulated inguinal hernia.</i> Herniotomy. Fæcal fistula in 3 hours. Patient in bad condition	Gut congested, but thought recoverable
2	G.T.K.	1889	M.	55	36 hours	<i>Strangulated inguinal hernia.</i> Herniotomy. Resection of 12 inches; artificial anus. Bad and fat subject; intemperate	—
3	J. D.	1891	M.	57	5 days	<i>Strangulated inguinal hernia</i>	Gut grey and sloughing
4	A. S.	1892	F.	44	1 day	<i>Strangulated femoral hernia.</i> Gut thought recoverable and returned. Abdomen opened 2 days later; peritonitis present	2 inches of small gut found gangrenous
5	E. J.	1892	M.	53	3 days	<i>Strangulated inguinal hernia</i>	Gut gangrenous
6	K. J.	1893	F.	28	6 days	<i>Strangulated femoral hernia</i>	Gut gangrenous in patches
7	M. H.	1893	F.	62	2 days	<i>Strangulated femoral hernia</i>	Gangrenous patch on intestine occupying $\frac{3}{8}$ of circumference
8	J. N.	1894	F.	70	2 days	<i>Strangulated femoral hernia</i>	2½ inches of gut gangrenous
9	E. S.	1895	F.	56	3 days	<i>Strangulated femoral hernia</i>	Small patch gangrenous on free margin of gut
10	L. D.	1896	F.	51	4 days	<i>Strangulated femoral hernia.</i> Amount gangrenous not stated	—

Circular Enterorrhaphy.

Description of operation.	Remarks.	Result.
Second operation. Two inches of gut resected; inversion with Senn's rubber ring, and two rows of Lembert's sutures. (Immediate)	Abdomen contained fæces; irrigated with Hyd. Perchlor. Suture line a few inches from cæcum; union leaked. Rubber ring obstructed lumen. Gut black at line of suture	Death in 11 hours.
Gut resected; inversion with Senn's rubber ring; four long sutures and eight Lembert's. Gut bled very little. Time 1 hour 35 min. (Remote operation after 4 months)	Suture line water-tight, except to very great pressure	Death in 14½ hours.
Resection of 21 inches; 1 inch on either side of injured intestine removed; two rows of interrupted Lembert's sutures to mucous and serous coats respectively; V-shaped piece of mesentery removed. (Immediate)	Vomiting started a few hours after operation until death. Suture line just above cæcum; union good. Lumen considerably narrowed at suture	Death in 2 days.
Resection of 3 inches; two rows of Lembert's sutures. (Immediate)	Union line good, and lay 2½ feet from cæcum	Death in a few hours.
Three inches excised; mesentery not removed; two rows of interrupted Lembert's sutures Median cœliotomy; 2½ inches of gut resected; V-shaped piece of mesentery removed; Lembert's sutures to mucous and serous coats respectively	Flatus passed on 2nd day. Patient up on 16th day Much collapsed on admission. Fæcal fistula on 2nd day. No general peritonitis. Suture line 18 inches from cæcum; sutures held well, but the wall of gut thin and sloughing for 1 inch above line of suture. Perforation at upper limit of sloughing bowel	C. Death in 2 days.
Median cœliotomy; resection of 3 inches; two rows of Lembert's sutures to mucous and serous coats respectively. (Immediate)	Jaundice. No peritonitis. Suture 4 inches from ileo-cæcal valve. No leakage. Mucous membrane stained for 2 inches. Gall-stones	Death on 3rd day.
Resection of 6 inches; Czerny-Lembert sutures. Specimen in Museum (1011 c)	Pus around suture line; water leaked from hole on unattached border of gut. Mucous membrane formed a valve that prevented onward passage of fæces. Suture line 3 feet from cæcum	Death on 5th day.
Resection of wedge of gut, the base being ½ inch, and the apex corresponding to the mesenteric border of the gut. No mesentery resected. Continuous suture to mucous membrane, and interrupted Lembert's sutures to serous coat	Plastic peritonitis. Suture line withstood water test. No mechanical obstruction. Gut gangrenous for 8 inches above suture line. Distended above and collapsed below suture line	Death in 7 days.
Resection of 8 inches; two continuous sutures to mucous membrane, and interrupted Lembert's sutures to serous coat; all silk. Excision of V-shaped piece of mesentery	Fæcal fistula on 7th day. Discharged healed on 37th day	C.

No.	Initials.	Year.	Sex.	Age.	Duration.	Diagnosis, history, &c.	State of bowel at operation.
11	J. G.	1896	F.	55	5 days	<i>Strangulated femoral hernia</i>	2 inches of gut gangrenous
12	A. E.	1897	F.	30	5 days	<i>Strangulated femoral hernia</i>	—
13	C. A.	1889	M.	14	13 hours	Kicked by horse in epigastrium; acute pain; vomiting. Ruptured ileum close to cæcum	Much lymph in intestines
14	E. C.	1895	F.	50	5 years	Right lumbar colotomy 18 months previously for obstruction from growth	Small gut involved in carcinoma of transverse colon
15	T. Y.	1895	M.	12	48 hours	Run over	Ruptured small gut involving half circumference; peritonitis
16	D. L. W.	1896	F.	4 $\frac{3}{12}$	6 days	Enteric intussusception	Gut gangrenous; fæces in abdomen
17	C. H.	1892	M.	24	?	Ruptured gut. Two ruptures; one complete and one incomplete	—
18	J. A.	1894	M.	32	1 day	Enteric intussusception; reduced; polyp excised. Forty inches of gut involved, starting 8 inches from cæcum. Subsequent sloughing and hæmorrhage	Sloughing
							<i>Great Gut</i>
19	A. B.	1889	F.	43	?	Carcinoma of upper end of rectum. Lumbar colotomy 2 months previously	Gut in good condition
20	—	1893	F.	37	2 years	Chronic constipation. Median colotomy. Artificial anus. Paralysis of sigmoid	—
21	J. R.	1894	F.	48	—	Excision of sigmoid for carcinoma 5 months previously; attempted lateral anastomosis 3 months previously, abandoned as patient became collapsed	—
22	E. C.	1895	F.	50	5 years	Carcinoma of transverse colon involving small gut. Colotomy 18 months previously	Gut not distended

Description of operation.	Remarks.	Result.
inches resected; Czerny-Lembert sutures	Suture line perfect, 10 inches from cæcum. No peritonitis. Three fibrous strictures of small gut present. Death from asthenia	Death on 3rd day.
inches resected; Czerny-Lembert method	Suture line perfect, and lay 12 inches from cæcum	Death in 24 hours.
Resection of 2½ inches; mesentery resected and sewn; circular enterorrhaphy by fifty Lembert's sutures	Abdomen irrigated. Bowels open on 13th day. Parotitis	C.
Resection of involved part of jejunum; circular enterorrhaphy by Czerny-Lembert method	Colon resected and sutured at same time. P.M.—Recent local plastic peritonitis, caused by faulty union of large gut. Small gut suture perfect; small gut suture 8½ feet from pylorus	Death in 24 hours.
Resection; Lembert's sutures	Suture line showed no leakage. Rupture 44 inches from cæcum	Death in 36 hours.
Resection of intussusception; suture over Allingham bone bobbin; continuous to mucous membrane, and interrupted Lembert's to serous coat	No P.M.	Death in 24 hours.
Resection and Senn's plates to incomplete rupture; lateral enterorrhaphy with Senn's plates to complete rupture	Circular enterorrhaphy leaked (<i>vide</i> lateral enterorrhaphy of small gut)	Death in 3 days.
Resection on 22nd day from first operation; Murphy's button	Infusion before operation. Button 3 inches from cæcum. No leakage, but water only passed under considerable pressure. No peritonitis	Death in few hours.

Circular Enterorrhaphy.

Cœliotomy; resection of growth; V-shaped piece of mesentery removed; three mucous sutures and fifteen interrupted Lembert's	Acute general peritonitis. Suture line withstood water pressure that ruptured peritoneal coat	Death on 3rd day.
Excision of sigmoid, descending, and part of transverse colon; glass tube with rubber tube attached to upper end, and then brought out of anus; gut invaginated and sutured; infused 3 pints of normal saline. Attempted extra-peritoneal operation abandoned. Cœliotomy; circular enterorrhaphy by mucous and serous Lembert's sutures	Union perfect. Localised peritonitis in pelvis	Death on 2nd day.
Resection of 8 inches of transverse colon and small involved portion of jejunum; double circular enterorrhaphy with continuous Czerny-Lembert suture; large gut packed round with gauze and kept outside	Bowels open on 12th day. Discharged on 44th day. *Died at convalescent home. Result of suture perfect	*C.
	Small gut suture held well; large gut had leaked from failure of one stitch. No peritonitis. No secondary growth (<i>vide</i> small gut table)	Death in 24 hours.

No.	Initials.	Year.	Sex.	Age.	Duration.	Diagnosis, history, &c.	State of bowel at operation.
23	Wm.B.	1896	F.	26	5 months	Carcinoma of ascending colon	Bowel in good condition; no obstruction
24	J. S.	1896	F.	33	12 months	Carcinoma at junction of sigmoid and rectum. Constipation	Gut dilated

Great and Small Gut.

25	A. P.	1888	F.	47	4 months	Carcinoma of cæcum	Bowels relaxed some time before operation
26	E. O.	1891	M.	36	—	Carcinoma of cæcum and intussusception, with excision of cæcum Dec., 1890. Artificial anus	—
27	J. C.	1892	F.	58	4 days	Strangulated umbilical hernia. Cæcum gangrenous and resected. Artificial anus	—
28	S. A.	1893	M.	18	5 weeks	Gangrenous ileo-cæcal intussusception	—
29	S. A.	1894	M.	18	2 months	Round-celled sarcoma of cæcum. Ileo-cæcal intussusception reduced by operation in previous year	Distension
30	A. S.	1896	M.	28	6 months	Carcinoma of ascending colon	Some constipation; no obstruction; gut in good condition
31	T. E.	1896	M.	46	6 months	Carcinoma of ascending colon	Obstruction 6 weeks

Great and Small Gut.

32	J. C.	1889	M.	35	3 months	Carcinoma of cæcum. Excision of 11 inches of small gut and cæcum	—
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Description of operation.	Remarks.	Result.
Excision of 8 inches of ascending colon; no glands; omentum a little adherent; a running silk suture to mucous and serous coats respectively; bobbin used as a splint, and then pushed aside	Large ulcerative growth. Microscope: carcinoma. Discharged with simple fistula. Well 19 months after operation	C.
Excision of growth; continuous catgut suture to mucous membrane, and interrupted Lembert's to serous coats; great difficulty with mesenteric border	Obstruction on 5th day. Artificial anus. No P.M.	Death on 13th day.

Circular Enterorrhaphy.

Excision of cæcum; Lembert's sutures to mucous and serous coats (100 sutures)	Signs of peritonitis on 5th day. Pus from wound on 6th day. P.M.—General septic peritonitis; leakage from suture at attached border of gut; no obstruction	Death on 6th day.
Small gut stiffened with india-rubber ring; Lembert's sutures after attempted invagination of small into large gut had failed	Flatus passed in 36 hours. Bowels open 7th day. Fæcal fistula on 8th day. Subsequent skin plastic. Growth recurred (<i>vide</i> lateral enterorrhaphy of small and large gut)	C.
Interval of 14 weeks. Circular enterorrhaphy by sutures to mucous and serous coats	Obstruction in 3 days; enterotomy and suture. P.M.—Good union at suture line; no peritonitis	Death.
Laparotomy; reduction of greater part; incision of outer tube; excision of gangrenous inner and middle tubes; edges sutured from inside; incision in cæcum closed with sutures	Discharged on 59th day. Sarcoma developed later (<i>vide</i> next case)	C.
Resection of 8 inches; much matting; end to end suture with Murphy's button	Vomiting; fæcal fistula; general peritonitis. Union given way on mesenteric border for $\frac{1}{2}$ — $\frac{3}{4}$ inch, and also on opposite side; air in abdomen. Murphy's button free except for small tag	Death in 12 days.
Resection of 8 inches of colon and 1 inch of ileum; Allingham's bone bobbin; continuous suture to mucous membrane and interrupted silk Lembert's to serous coats; gland in mesentery	Obstruction until 6th day, when fæcal fistula appeared. P.M.—Ends lay in pool of pus and fæces, only united at two spots; no general peritonitis; no other glandular infection	Death on 13th day.
Resection of 8 inches of colon and 1 inch of ileum; Allingham's bone bobbin; continuous suture to all coats and interrupted Lembert's sutures to serous coats	Fæcal fistula in 7 days. Bowel closed on 69th day. *Died some weeks after leaving hospital of recurrence of obstruction. No P.M.	*C.

Lateral Enterorrhaphy.

On 78th day implantation of ileum into colon with catgut sutures	Leakage through small hole at mesenteric border of small gut; local peritonitis only; small gland infected	Death on 2nd day.
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No.	Initials.	Year.	Sex.	Age.	Duration.	Diagnosis, history, &c.	State of bowel at operation.
33	E. O.	1892	M.	37	4 days	Recurrent carcinoma of cæcum. Previous resection and end to end enterorrhaphy by Senn's rubber rings	Obstruction
34	N.A.E.	1892	M.	32	4 months	Intussusception reduced before operation; resection of cæcum	No definite obstruction
35	J. L.	1896	M.	30	10 weeks	Carcinoma of cæcum. Treated at first for appendicitis	—
<i>Small Gut.</i>							
36	S. W.	1892	F.	59	4 days	Strangulated femoral hernia	Loop of small gut found gangrenous; distended gut
37	C. H.	1892	M.	24	—	Kick from a horse; ruptured gut	Two complete ruptures 30 inches from pylorus, and an almost complete rupture 20 inches from pylorus
38	J. H.	1893	M.	65	4 days	Strangulated umbilical hernia	Loop of small gut gangrenous; fæces in sac
39	M. B.	1894	F.	56	4 days	Strangulated umbilical hernia; large fibroma of ovary	Knuckle of small gut gangrenous
40	E. B.	1894	M.	13½	1 day	Subperitoneal cyst of small gut, producing pressure on small gut	Obstruction; vomiting
<i>Small Gut.</i>							
41	F. C.	1896	F.	27	3 years	Fibrous stricture of small gut; two separate constrictions 5 inches apart	Bowel much distended, visible peristalsis; repeated puncture necessary to empty bowel

Description of operation.	Remarks.	Result.
Resection of recurrent growth; 7 inches of gut removed; ends invaginated; Senn's plates	General peritonitis; small gut much distended; water could only be forced through under a pressure that tore out the stitches. Invaginated portion of lower segment blocked the opening (<i>vide</i> circular enterorrhaphy of great and small gut)	Death in 2 days.
2nd day, resection of 5 inches of ascending colon and 2 inches of ileum; ends invaginated; Senn's plates	Discharged on 48th day	C.
Resection of cæcum and ascending colon and small part of ileum; implantation of ileum into cæcum by Maunsell's method; colon attached by open end to skin; two subsequent plastics to close artificial anus	Discharged on 175th day with simple fistula. Alive in 1898, nearly two years after operation	C.
<i>Lateral Enterorrhaphy.</i>		
Resection of 7 inches; Senn's plates	Suture line 6 feet from cæcum; tissue of bowel so friable that sutures did not hold; water escaped freely. Gangrene in gut corresponding to the edges of one plate	Death in 2 hours.
Resection of 13 inches; Senn's plates with Lembert's sutures; ends invaginated (incomplete rupture, end to end suture with Senn's plates and Lembert's sutures)	Sudden pain on 3rd day. Lateral anastomosis found leaking, and closed with Lembert's sutures. Circular enterorrhaphy leaking from sloughing out of sutures. Artificial anus. Death in few hours. No general peritonitis; edges of invaginated upper portion of lateral anastomosis found sloughing	Death in 3 days.
3 inches resected with V-shaped piece of mesentery; Lembert's sutures; gut packed round with gauze and left <i>in situ</i>	P.M.—Resected portion 4 feet from cæcum; no peritonitis or extravasation; granular kidneys; broncho-pneumonia	Death in 24 hours.
Resection of 16 inches of small gut; Halstead's method	Obstruction on 3rd day. Artificial anus. P.M.—Union good; water passed freely; gut collapsed below union, and occluded by pressure of fibroma just above cæcum	Death on 5th day.
Resection of cyst and small gut; Murphy's button; coats tightly stretched over button; end of gut sutured to skin and button left <i>in situ</i>	Following day sudden pain and collapse. Infused 1 pint with 1 oz. of brandy. Button brought out; gut sloughing; artificial anus. P.M. — Suture 22 inches from cæcum; general peritonitis; upper segment distended, lower collapsed	Death in 24 hours.
<i>Lateral Anastomosis.</i>		
Sero-muscular flaps raised and sutured; also suture to mucous membrane	Uninterrupted recovery. Well in 1898	C.

No.	Initials.	Year.	Sex.	Age.	Duration.	Diagnosis, history, &c.	State of bowel at operation.
42	Wm. S.	1897	M.	51	2 months	Matting of small gut following radical cure of strangulated inguinal hernia	Much matting, but gut in good condition
<i>Great Gut</i>							
43	M. H.	1897	M.	62	2 months	Carcinoma of splenic flexure	Obstruction; dilated ascending colon
44	C. B.	1895	F.	20	—	Fæcal fistula after removal of suppurating tubes	—
<i>Great and Small Gut</i>							
45	A. B.	1897	M.	13	6 weeks	Chronic obstruction due to matting about cæcum	Gut in good condition; some dilatation of small gut
46	E. C.	1897	F.	31	4 months	Carcinoma of rectum; chronic obstruction; colotomy; recurrent obstruction	Vomiting; obstruction
47	—	1894	F.	52	4 years 7 months	Carcinoma of cæcum noted at ovariectomy 4 years previously. Distension and pain for 7 months	Distension
48	E. K.	1896	F.	51	8 months	Carcinoma of sigmoid flexure	Obstruction had subsided by time of operation
<i>Gastro</i>							
49	H. B.	1897	F.	46	7 months	Carcinoma of pylorus	—
50	E. D.	1891	F.	31	10 months	Carcinoma of pylorus; emaciation	Vomiting 3 months; stomach dilated
51	E. R.	1895	F.	43	8 months	Carcinoma of pylorus	—
<i>Pyl</i>							
52	H. G.	1892	M.	47	3 years	Carcinoma of pylorus	—

Description of operation.	Remarks.	Result.
Halstead's method	Gas seen to pass at time of operation	C.
<i>Lateral Anastomosis.</i>		
Lateral anastomosis of transverse and descending colon with Murphy's button	P.M.—General peritonitis; faecal extravasation; huge dilatation of colon, which was full of soft faeces; walls of gut pulled away from button	Death in 3 days.
Rectum and sigmoid; Murphy's button	Fistula gradually closed. Button passed on 13th day	C.
<i>Lateral Anastomosis.</i>		
Lateral anastomosis with Senn's plates and Lembert's sutures	—	C.
Lateral anastomosis by Lembert's sutures of the ileum and caecum	Patient moribund at operation. No P.M.	Death.
Lateral anastomosis of ileum and ascending colon with Murphy's button	Button passed on 26th day	C.
Lateral anastomosis between ileum and sigmoid with Murphy's button, strengthened with Lembert's sutures	Carcinoma on peritoneum. Button passed on 10th day	C.
<i>Jejunostomy.</i>		
Gastro-jejunostomy by Halstead's method, with loop of small twisted	Died 5 months later in infirmary. P.M.—Anastomosis perfect	C.
Gastro-jejunostomy; no adhesions; jejunum 4 inches from duodenum fastened to greater curvature of stomach with Senn's plates and Lembert's sutures	P.M.—Water passed from stomach to jejunum, but not <i>vice versa</i> ; stricture at pylorus only admitted a probe	Death in 12 hours.
Gastro-jejunostomy with Senn's plates; jejunum twisted to ensure right peristalsis	Death from cerebral hæmorrhage. Union perfect; opening admitted little finger; opening in jejunum 17 inches from pylorus, and in stomach 5 inches from pylorus, close to greater curvature; pylorus size of goose-quill; glands in lesser omentum	Death on 47th day.
<i>Rectomy.</i>		
Median incision; excision of growth; upper part of stomach wound sewn to lessen opening; circular enterorrhaphy by Senn's plates and Lembert's sutures; growth involved 2 inches of stomach; no glands or adhesions	Vomiting on 2nd day; distension and visible peristalsis of stomach; lavage; suture line glued to liver; small local abscess; no leakage; no general peritonitis; hypostatic pneumonia	Death on 5th day.

The table represents the experience of the Hospital in operations for enterorrhaphy and anastomosis of bowel for the ten years ending 1897.

The details have been obtained from the notes, and therefore lack the interest that a table compiled by one observer would have.

The fact, however, that the tables show the work of many men has this advantage, namely, that the personal element is eliminated, and the best operation is likely to show the best results.

The number of operations is too small for any general inference to be drawn, but it is hoped that the table may be of use to other observers.

The numbers in front of the items under the heading "Nature of case," refer to the numbers in front of the items under the heading "Method of suture."

Small Gut. Circular Enterorrhaphy.

18 cases. Died 15; recovered 3.

<i>Nature of case.</i>	Cured
1. Strangulated inguinal hernia . . . 4 (remote 1, fatal, union good)	1
2. „ femoral hernia . . . 8	1
3. Enteric intussusception 2	
4. Ruptured gut (lateral enterorrhaphy also 1)	3 1
5. Carcinoma of small gut (enterorrhaphy of great gut also).	

Method of suture.

4. Senn's plates	1
1. Senn's rubber ring	2
3. Murphy's button	1
1, 2, 3, 4, 5. Czerny-Lembert	14 3

Union in fatal cases.

Union perfect	9 (no P.M. 1).
Gangrene at site of suture	3 (all hernia).
Mechanical obstruction at suture	3

The high mortality is due to a number of strangulated herniæ, inguinal and femoral. In seven of these cases the fatal result cannot be traced to the suture, which was perfect at the post-mortem, and must be laid at the door of the condition for which the operation was done, or to the length of the operation. In all these cases, with one exception, the operation was immediate, and the remote operation was fol-

lowed by a fatal result, but the union was stated to be good at the autopsy.

Figures go to prove that at present the immediate operation offers the best chance for the patient, but it is significant that in three cases the union failed through gangrene of the sutured edges.

This is, I think, an important fact, and becomes even more so when the post-mortem records of strangulated hernia, in which an artificial anus has been made, are studied. It is in these cases that the lower segment of the upper section of bowel is found to be deeply congested or even gangrenous, although at the time of operation the section was made at a point six or seven inches above the gangrenous portion of the bowel, and the cut surface appeared perfectly healthy. The distension of the bowel is here obviously to blame. To do an intestinal suture with the possibility of this happening is simply to court disaster.

It seems, therefore, that in a case in which there is any distension of the upper segment of the bowel, the best chance lies in cutting wide of the gangrene on the upper segment of the bowel and bringing the ends out in the mid-line and then waiting a few days for the effect of the distension to subside.

In no other case has it been advocated to perform enterorrhaphy with distended bowel.

The mid-line opening has also the advantage that the suture line is not subjected to a deleterious pressure as is often the case when the bowel is returned through the herniotomy opening.

Great Gut. Circular Enterorrhaphy.

6 cases. Died 4; recovered 2.

<i>Nature of case.</i>		<i>Cured</i>
1. Carcinoma of rectum	3 (remote 2)	1
2. Dilated sigmoid	1	
3. Carcinoma of transverse colon with involve- ment of small gut	1	
4. Carcinoma of ascending colon	1	1
<i>Method of suture.</i>		
1, 4, 3. Simple suture	5	2
2. Invagination	1	

Union in fatal cases.

Union failed	1
Obstruction and no P.M.	1
Perfect in 2, of which one died of peritonitis.	

Passing to circular enterorrhaphy in the great gut, the results are more encouraging.

Putting aside the intussusception which was treated by Maunsell's method there was only one case in which the gut was not in good condition, and this case developed obstruction which necessitated the formation of an artificial anus and was fatal, but no examination was made after death.

Of the other fatal cases, one was a double enterorrhaphy for carcinoma of the transverse colon involving the small gut, and although the union of the great gut failed there was no peritonitis, and death was due in great measure to the protracted operation. The next fatal case was due to peritonitis, caused apparently by the soiling of the peritoneum at the time of operation, and in the last the fatal result must be attributed to the operation.

The case of the double enterorrhaphy is interesting, as a period of eighteen months intervened between the primary colotomy and the resection, in which time the growth had clinically decreased in size, and at the post-mortem there were no secondary growths.

Great and Small Gut. Circular Enterorrhaphy.

7 cases. Died 4; recovered 3.

Nature of case.

						Cured
1. Carcinoma of cæcum and ascending colon	3	.	.	.	.	1
2. Intussusception and carcinoma of cæcum	1 (remote)	.	.	.	.	1
3. Recurrent sarcoma of cæcum	1					
4. Ileo-cæcal intussusception	1	.	.	.	.	1
5. Strangulated umbilical hernia	1 (remote).					

Method of suture.

1, 5. Simple suture	2					
2. Senn's rings	1	.	.	.	.	1
4. Maunsell's method (intussusception)	1	.	.	.	.	1
3. Murphy's button	1					
1. Allingham's bobbin	2	.	.	.	.	1

Union in fatal cases.

Union failed in 3; union good in 1.

The suture in the umbilical hernia was remote, and it is noteworthy that obstruction was the cause of death and the suturing perfect.

Murphy's button was used in the case of sarcoma of cæcum in which distension was present. The sloughing process by which the button was set free had gone on unevenly, and led to failure of union over a large area.

Great and Small Gut. Lateral Enterorrhaphy.

4 cases. Died 2; recovered 2.

<i>Nature of case.</i>		Cured
1. Carcinoma of cæcum	2	1
2. Recurrent carcinoma of cæcum	1	
3. Intussusception	1 (remote)	1

Method of suture.

1. Implantation of small gut into large	2	1
3, 2. Senn's plates	2	1

Union in fatal cases.

Implantation: leaked 1.

Senn's plates: mechanical obstruction and peritonitis.

In the successful case of lateral implantation the colon was left open and sutured to the skin. This, although making the operation very safe, prolonged the stay in hospital to 175 days.

In the fatal case in which Senn's plates were used, the invaginated portion of the colon blocked the opening, so that water could only be pressed through at a great pressure, and the small gut was greatly distended. This apparently resulted from making the lateral opening too near the end of the bowel.

Small Gut. Lateral Enterorrhaphy.

5 cases. Died 5.

Nature of case.

1. Strangulated femoral hernia	1
2. „ umbilical hernia	2
3. Ruptured gut	1
4. Subperitoneal cyst	1

Method of suture.

1, 3. Senn's plates	2	Union failed 2.
2. Lembert's suture	1	Union good.
2. Halstead	1	Union good.
4. Murphy's button	1	Union failed.

The nature of the four cases sufficiently represents the cause of the great mortality. The case of ruptured gut involved the necessity for a lateral as well as a circular enterorrhaphy, and both had failed to unite.

The obstruction in the case of the strangulated umbilical hernia was due to the pressure of a large fibroma of ovary, and not due to the suturing.

In the case in which Murphy's button was used there was obstruction at the time of the operation, and the gut was tightly stretched over the button. The condition of the patient was too grave at the time to readjust the button, so the ends of the gut were brought out. Even this did not save the sloughing of the gut.

The union in the two umbilical herniæ was good, but both were fatal, though the operation cannot be said to be responsible.

Small Gut. Lateral Anastomosis.

2 cases. Recovered 2.

Nature of case.

Fibrous stricture of small gut	1
Matting after strangulated hernia	1

Method of suture.

With sero-muscular flaps	1
Halstead's method	1

Great Gut. Lateral Anastomosis.

2 cases. Died 1; recovered 1.

Nature of case.

Cured

Carcinoma of splenic flexure	1								
Fæcal fistula, short circuiting	1								1

Method of suture.

Murphy's button	2 (union failed in fatal case).
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In the fatal case there was extreme distension.

Great and Small Gut. Lateral Anastomosis.

4 cases. Died 1; recovered 3.

<i>Nature of case.</i>										Cured
Carcinoma of rectum	.	.	.	.	.	1				
„ sigmoid	.	.	.	.	.	1	.	.	.	1
„ cæcum	.	.	.	.	.	1	.	.	.	1
Matting about cæcum	.	.	.	.	.	1	.	.	.	1

Method of suture.

Lembert's suture	.	.	.	.	.	.	1 (no P.M.).
Murphy's button	.	.	.	.	.	.	2
Senn's plates	.	.	.	.	.	.	1

The patient in the only fatal case in this series was moribund, so that the result, taken as a whole, must be considered satisfactory.

Gastro-jejunosomy.

3 cases. Died 2; recovered 1.

<i>Nature of case.</i>	Cured
Carcinoma of pylorus 3	

Method of suture.

Halstead	.	.	.	.	.	.	.	1	.	.	.	.	.	1
Senn's plates	.	.	.	.	.	.	.	2						

Union in fatal cases.

Good in all.

One case of gastro-jejunostomy performed with Senn's plates is entered as fatal, but the case really died on the forty-seventh day from cerebral hæmorrhage, so that the operation was itself entirely successful and in no way contributed to the fatal result.

Table to show Results of different methods of Suture.

<i>Circular Enterorrhaphy.</i>										Cured
Simple suture	.	.	.	.	.	21	.	.	.	5
Murphy's button	.	.	.	.	.	2	.	.	.	0
Senn's rings	.	.	.	.	.	2	.	.	.	1
Senn's plates	.	.	.	.	.	2	.	.	.	0
Invagination	.	.	.	.	.	1	.	.	.	0
Maunsell's method	.	.	.	.	.	2	.	.	.	2
Allingham's bobbin	.	.	.	.	.	2	.	.	.	1
Total						32				9

Lateral Enterorrhaphy.

									Cured
Implantation	.	.	.	.	.	2	.	.	1
Senn's plates	.	.	.	.	.	4	.	.	1
Simple suture	.	.	.	.	.	1	.	.	0
Halstead's method	.	.	.	.	.	1	.	.	0
Murphy's button	.	.	.	.	.	1	.	.	0
						<hr/> 9			<hr/> 2

Lateral Anastomosis.

Simple suture	.	.	.	.	.	2	.	.	1
Halstead's method	.	.	.	.	.	1	.	.	1
Senn's plates	.	.	.	.	.	1	.	.	1
Murphy's button	.	.	.	.	.	4	.	.	3
						<hr/> 8			<hr/> 6

The great difference in the mortality between the circular enterorrhaphy and the lateral enterorrhaphy on the one hand and the lateral anastomosis on the other hand is striking, and shows how the mortality rises at once when the gut is completely divided.

The difference between the circular and lateral enterorrhaphy is not so great, being only about 6 per cent.

TABLE OF MALIGNANT CASES.

No.	Disease.	Duration	Previous treatment.	Method of suture.
1	Carcinoma of rectum	?	Colotomy 2 months previously	C. E. (remote)
2	Carcinoma of sigmoid	—	Resection 5 months previously	C. E. (remote)
3	Carcinoma of transverse colon	5 years	Colotomy 18 months previously	C. E.
4	Carcinoma of ascending colon	5 months	—	C. E.
5	Carcinoma of sigmoid	12 months	—	C. E.
6	Carcinoma of cæcum	4 months	—	C. E.
7	Carcinoma of cæcum	—	Excision of cæcum 2 months previously	C. E. (remote)
8	Carcinoma of cæcum (recurrent)	—	Readmitted after 13 months	L. E.
9	Carcinoma of ascending colon	6 months	—	C. E.
10	Carcinoma of ascending colon	6 months	—	C. E.
11	Sarcoma of cæcum	2 months	Intussusception reduced by operation in previous year	C. E.
12	Carcinoma of cæcum	3 months	—	L. E. (remote)
13	Carcinoma of cæcum	10 weeks	—	L. E.
14	Carcinoma of splenic flexure	2 months	—	L. A.
15	Carcinoma of rectum	4 months	—	L. A.
16	Carcinoma of cæcum	4 years	—	L. A.
17	Carcinoma of sigmoid	8 months	—	L. A.

C. E.=Circular enterorrhaphy.

L. E.=Lateral enterorrhaphy.

Result.	Remarks.	Initials.	Reference to general table.
Death in 3 days	No secondary growths	A. B.	19
Cured	Died at convalescent home a few months later	J. R.	21
Death in 24 hours	No secondary growth	E. C.	22
Cured	Alive and well 24 months after operation	Wm. B.	25
Death on 13th day	No post-mortem	J. S.	24
Death on 6th day	No secondary growths	A. P.	25
Cured	Growth recurred following year (<i>vide</i> next case, 8)	E. O.	26
Death in 2 days	Local examination only. No mention of secondary growth	E. O.	33
Death in 13 days	No secondary growths	A. S.	30
Cured	Died some weeks after leaving hospital from obstruction and recurrence	T. E.	31
Death in 12 days	No secondary infection	S. A.	29
Death in 2 days	Small gland infected	J. C.	32
Cured	Alive 2 years after operation	J. L.	35
Death in 3 days	No secondary growths	M. H.	43
Death in few hours	No post-mortem	E. C.	46
Cured	—	?	47
Cured	—	E. K.	48

L. A. = Lateral anastomosis.

THE
SUBSTITUTION OF THE ANTERIOR BONY
WALL OF THE FRONTAL SINUS

BY A

PLATE OF PURE PLATINUM.

By CHARLES A. BALLANCE, M.S.,
ASSISTANT SURGEON.

H. B—, æt. 34, a clerk, was admitted on May 26th, 1896.

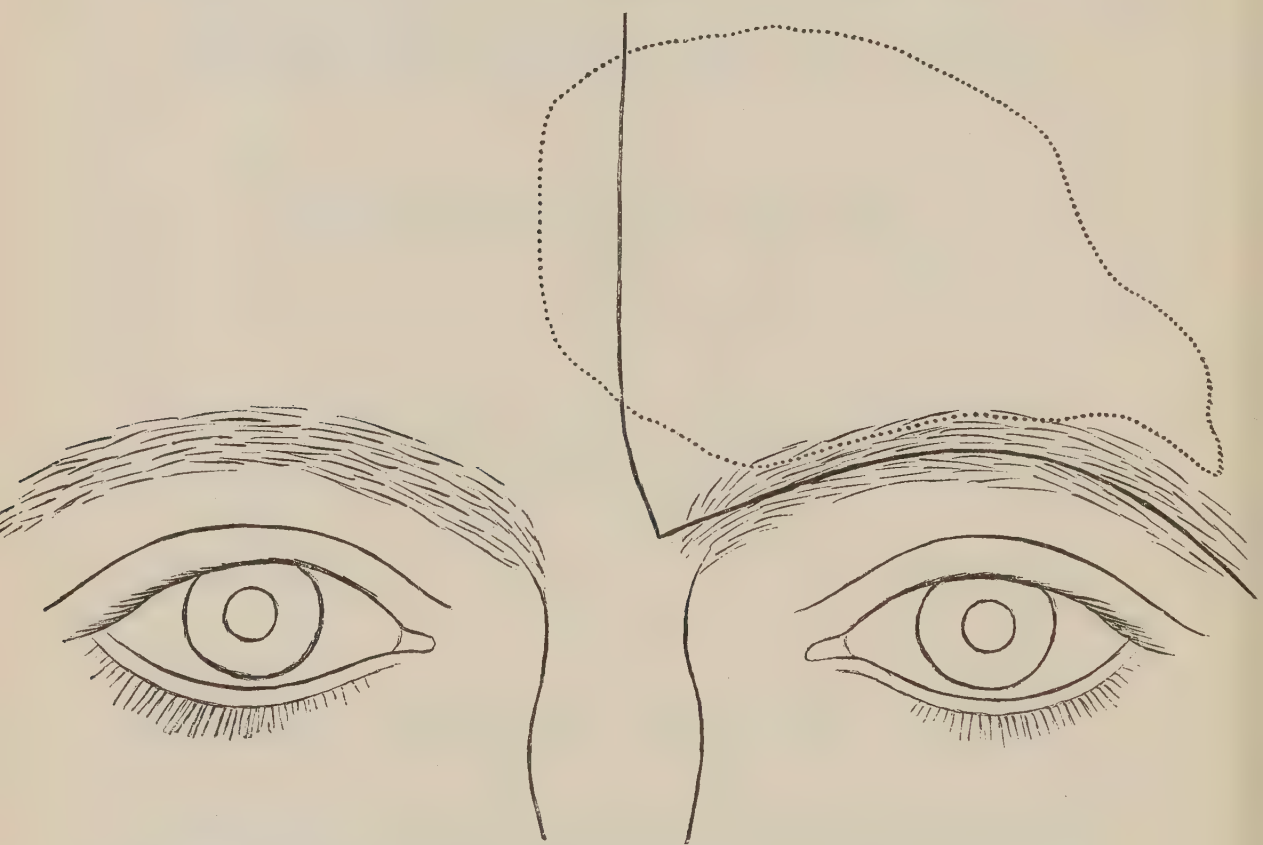
History of present illness.—For two years there has been a thick, yellowish, offensive discharge from the left nostril, and on various occasions mucous polypi have been removed. Pain has been constant and sometimes very severe in the left supra-orbital region. Lachrymation of the left eye has been noticed, and lately patient has been drowsy, the tendency to sleep during the day being difficult to overcome. Sir Felix Semon asked me to take him into the hospital.

On examination by transillumination it was clear that the left frontal sinus and left antrum of Highmore were quite opaque to the transmission of light, and were probably full of pus. There was no optic neuritis.

First operation (May 23rd, 1896).—Left antrum of Highmore opened through the canine fossa. Fœtid pus escaped, and much granulation tissue was scraped away. A tube was introduced and the parts cleansed in the usual manner.

Second operation (May 26th, 1896).—The left eyebrow having been shaved, two incisions were made—one in the median line of the forehead about two inches long, and the other along the left supra-orbital ridge (see Fig. 1). The

FIG. 1.



From a cast of the forehead taken February 1st, 1897. The dotted line shows the exact outline of the depression; it will be noticed that the sinus crosses the middle line. The black lines are the lines of incision made at the operation.

flap thus marked out was raised upwards and outwards with the periosteum. A circle of bone was removed with the trephine over the normal site of the left frontal sinus. Offensive pus escaped, and granulation polypi filling the cavity were discovered. The probe proved that the sinus was very large; and in order the more certainly and completely to remove all the polypi, many of which were very

minute and difficult to reach, the entire anterior wall of the sinus was taken away. The mucous membrane was then separated from the posterior wall of the sinus and removed as a whole with polypi and pus. This process was continued down the infundibulum till healthy mucous membrane was reached. The sinus was then cleansed repeatedly with chloride of zinc solution 40 grs. to ℥j, a tube was introduced from the left anterior naris into the infundibulum, and lastly the flap of soft parts was very carefully adjusted by numerous fine silver wire and horsehair sutures.

The after-treatment consisted in irrigation with chlorinated soda lotion; the headache ceased at once, and the patient left the hospital cured on June 8th, 1896.

FIG. 2.



From a photograph. Appearance of depression in forehead, February 1st, 1897, before the platinum plate was used to cure the deformity. Patient placed a cloth round the lower part of the face as he did not like being photographed.

Patient was readmitted on January 25th, 1897, with a large, deep, disfiguring depression in the forehead corresponding with the left frontal sinus (see Fig. 2). A cast of the forehead was taken (see Fig. 1), and a plate of pure platinum the exact size of the depression was prepared by Messrs. Down.

Third operation (February 4th, 1897).—A flap consisting only of skin was made by incisions passing through the median and supra-orbital scars. Great care was taken not to open the infundibulum. The bony edge of the depression having been made clear, a sterilised plate of pure platinum was accurately fitted. Four fine holes were drilled in the plate, and four corresponding ones in the bone surrounding the cavity—two along the upper border, and two through the supra-orbital ridge. Through these openings fine platinum wire was passed, and by its means the plate was fixed securely in position. The skin flap was then replaced, and sutured with fine horsehair.

Healing took place rapidly; the patient left the hospital on February 20th, 1897, and some weeks afterwards a photograph of the patient was taken which is represented in Fig. 3.

FIG. 3.



From a photograph of patient taken some weeks after the platinum plate was fixed in position.

September 23rd, 1898.—Patient presented himself at the hospital to-day. The appearance of the forehead is practically perfect. The plate is immoveably fixed. Patient has

no abnormal sensations in the forehead, and is unconscious of the presence of the platinum.

Remarks.—The choice of a material to permanently take the place of the anterior wall of the frontal sinus was limited. It was necessary to select a substance of sufficient rigidity, and one too on which the living tissues and fluids have no action, no power of absorption. Hence silver was out of court, and pure gold is too soft; gold of the fineness of the sovereign is an alloy which is acted on by the living tissues. A sheet of pure platinum appeared the best material, and, moreover, pure platinum wire could easily be obtained for the purpose of fixing the plate in the required situation.

Other plans (and several were considered) might have succeeded, such as filling the cavity with chips of living bone; but the forehead is so conspicuous that its symmetry could hardly have been regained without the employment of a plate.

The exact weight of the platinum plate employed was 183·5 grains. The metal is so heavy that it was desirable to have the plate as thin as was possible combined with the necessary rigidity. The thickness of the platinum plate was No. 31 Imperial standard wire gauge.

TRAUMATIC BIRTH PARALYSES OF THE UPPER EXTREMITY.

BY H. BETHAM ROBINSON, M.S.LOND.,
ASSISTANT SURGEON.

CASES illustrating the above lesions are far from uncommon among the out-patients of a children's hospital, and as their real nature is only too seldom recognised I have embodied in this paper several instances that have occurred in my hospital practice.

The subject is one of special interest to obstetricians, to those particularly dealing with diseases of children, and to neurologists. To the last chiefly we are indebted for the descriptions of the lesion, especially to that master of his art, Duchenne, who really first described it as "*paralysie obstétricale infantile du membre supérieur*:" references to it may be found in the works of Gowers and Ross. Of the text-books dealing with diseases of children, Ashby and Wright give the best account.

In the subjoined paper the details of my seventeen cases come first, and are followed by a description of the lesion, with comments on unusual points to be noticed.

CASE 1.—Agnes B— was brought to me at Shadwell on June 17th, 1892, at the age of 3 months, with the right arm hanging flaccid and twisted inwards.

This condition had been noticed immediately after the birth, which was very tedious and difficult. It was a footling presentation, and there was very great difficulty in bringing down the arms; forceps were used to the after-coming head, which was very misshapen.

She was the second child; the other one, some three years older, presented no deformity, and was born very easily.

The right shoulder and upper arm were wasted, but the forearm seemed about normal. The head of the humerus was rather prominent backwards, but it was not displaced from its cavity, and could be passively moved quite readily. The arm was rotated inwards, and the forearm was pronated, so that the palm of the hand looked directly outwards.

At the shoulder-joint the deltoid and spinati were inactive but the internal rotators contracted. The flexors of the elbow seemed paralysed, and there was very slight action of the triceps.

The wrist-joint and fingers could be moved. The child was too young to determine the sensation. The left arm was normal. Galvanism and rubbing with soap liniment were ordered.

During the next few months the wasting about the shoulder and upper arm became more marked, and the arm was more fixed at the shoulder-joint. The same treatment was continued.

For some time then she ceased attendance, but in June, 1895, she was again brought to me, and the following note was made:—"The shoulder-joint, which was stiff when last seen, is now quite lax. There is now slight action of the deltoid and spinati, but biceps and triceps are very weak. The scapula is a little winged, and the humerus is rotated in; the forearm pronated and slightly flexed at the elbow-joint. The internal rotators of the humerus, especially the subscapularis, act very strongly. Until lately the second, third, and fourth fingers were not able to be bent. The right humerus is $\frac{3}{4}$ inch shorter, and the forearm $\frac{1}{2}$ inch

shorter than the left side. In circumference the arms showed a very marked difference, but the forearms only differed by a half-inch."

CASE 2.—John G—, æt. 2 years and 10 months, was brought to me at the Children's Hospital, Shadwell, on February 3rd, 1893. The child was the sixth, and in none of the others had there been any deformity. The birth occurred at full term, and was tedious; the presentation was cranial, but the difficulty was in delivering the arms. After his birth it was noticed that he could not lift up the arm at the shoulder, that the arm was twisted inwards, and that the palm looked outwards. Nothing was done to the arm, and its use was gradually regained.

On examination there was marked wasting about the left shoulder-joint and front of upper arm. The arm was rotated inwards, and the head of the humerus could be felt under the wasted deltoid at the posterior part of the glenoid cavity, and it was very moveable; if the limb were rotated outwards and abducted this prominence disappeared. The biceps was wasted, and the forearm strongly pronated. The child was given strychnine and iron, and massage ordered, but after three weeks' attendance nothing more could be traced.

CASE 3.—Rebecca C—, æt. 6 weeks, was brought to me at Shadwell on April 30th, 1895. The history given was that after the birth it was noticed that the shoulder and arm on the left side did not move at all, and that the arm was twisted inwards.

On examination it was seen that the head faced outwards by the pronation of the forearm, but the hand itself moved all right. There was no evident wasting of muscles, but the deltoid, spinati, and biceps did not act; the teres major was normal. She was the sixth child. The birth was tedious, and a cranial presentation; no instruments used. Massage with liniment ordered, and strychnine given.

After the end of a week more movement was noticed, and gradual improvement afterwards noted.

When seen August 17th, 1896, no definite wasting to be detected. The shoulder was unable to be rotated outwards properly, but otherwise movements good.

CASE 4.—Isabel B—, æt. 3 weeks, was brought to me at Shadwell on July 19th, 1895. The left arm was noticed to be paralysed directly after the birth; the fingers could be moved, but not the shoulder or the elbow.

On examination the limb was in the characteristic position, rotated inwards at shoulder, forearm extended and pronated, palm of hand looking outwards. The clavicle was sound. The shoulder muscles except the teres major were not so marked as the other side. There was free

FIG. 1.



CASE 4.—Isabel B—. Showing typical position of the arm.
(From a photograph by the author.)

movement at the joints. There was no bruising of shoulder or neck. The birth was not easy; cranial presentation, but considerable delay before birth of shoulders. No forceps used. Massage and continuous current ordered.

On November 26th said to move the arm better, but position just the same, and shoulder seems a little rigid.

On December 19th Dr. Turney kindly reported on the electrical reactions as “no electrical changes in the muscles of the left shoulder.”

January 31st.—Arm seems stiffer, but position the same ; no more wasting.

In June a note made “in the same condition,” and not seen since.

CASE 5.—Evelyn M. Q—, æt. 5 weeks, brought to me at St. Thomas's Hospital on October 13th, 1896.

Since birth the child's right arm was noticed to hang by the side powerless. The only movements to be seen were flexion of the fingers and slight extension of the forearm ; the forearm cannot be flexed. The position of the arm was characteristic ; the humerus rotated inwards, the forearm pronated and extended, and the palm of the hand looked outwards. On examination of the muscles about the shoulder and upper arm it was made out that the *teres major* and the *triceps* contracted. On the left side the child had a sterno-mastoid tumour in the middle of the muscle.

The mother had had nine children, all of them difficult labours. (1) Girl, had to be sacrificed at birth. (2) Girl, delivered at eight months with instruments ; child healthy. (3) Boy, born at eight months with instruments ; cranial presentation, child healthy. (4) Boy, a large child, but yet delivered at full time with instruments ; cranial presentation, since healthy. (5) Girl, born at full term with forceps ; cranial presentation, no after deformity, died at eighteen hours. (6) Girl, born dead at full term, no instruments used ; breech presentation. (7) Girl, born naturally at full term ; cranial presentation, died at eighteen months of diphtheria. (8) Girl, born at full term without instruments ; cranial presentation, afterwards healthy. (9) Girl, the present patient, very difficult and tedious birth at full term ; cranial presentation, and forceps used. Great trouble in dealing with the arm.

Dr. Turney, who kindly examined the muscles electrically, reports “muscles on both sides of the body of the shoulder and upper arm react the same ; no reaction of degeneration to be detected in the deltoid, the most suitable for examination.”

CASE 6.—Edith L—, æt. 2 months, Shadwell, December 11th, 1896. Noticed directly after birth that the left

arm hung down loose, and the doctor said the collar-bone was broken. On the fifth day the mother herself noticed the peculiar position of the arm.

The labour was difficult and prolonged, cranial presentation, head very much bruised and misshapen; no forceps used. The doctor said it was difficult to bring the arms down. Eleventh child; all previous labours had been severe, but all children born alive, and forceps not been needed.

On examination head of humerus a little forwards, lower part of pectoralis major very contracted. Deltoid, biceps, and infra-spinatus specially wasted. Fingers move all right, and extension of elbow good. Shoulder a little stiff. Ordered galvanism, lin. saponis, and iron and strychnine.

CASE 7.—Samuel S—, æt. 3 months; January 5th, 1897. Right arm noticed to be twisted inwards one week after birth. The latter was long and tedious, cranial, but no instruments used. No known difficulty in delivering the arms. Asymmetrical head. Elbow can be flexed a little, but triceps lax. Much pronation of forearm. Forearm muscles seem all strong.

March 26th.—The galvanism which was started towards end of January seems to have wrought improvement. Elbow cannot be flexed. Slight abduction of shoulder (supra-spinatus), but infra-spinatus wasted. Shoulder a little fixed.

CASE 8.—Richard W—, æt. 9 weeks, Shadwell, February 16th, 1897. It was first noticed on the third or fourth day that the left arm was twisted inwards and the hand pointed outwards. Tenth child, eight of whom were alive. No deformity in family. Very bad confinement, with breech presentation. Right arm got extended above the head and difficult to get down; the left arm came down some two hours before the head. No forceps used. No bruising of arm. The child was a large one. Other confinements had been bad. Ninth child was a breech presentation and very difficult; left arm was rather weak, but it got all right. The rest were cranial cases.

Since birth the arm seems to have wasted considerably.

Deltoid, infra-spinatus, pectoralis major, biceps and triceps wasted and inactive, so that humerus rotated inwards; no external rotation at shoulder, and no flexion or extension at elbow. Forearm pronated. No power of extension at wrist, and flexors of wrist and fingers seem contracted, so that if fingers extended passively the wrist is further flexed, and *vice versâ*. The radial wrist flexors seem paralysed, but the flexor carpi remains very strong, drawing wrist to the ulnar side. Thumb extensors very weak. Galvanism and rubbing with liniment ordered: splint to keep wrist and fingers straight.

March 2nd.—Extension of wrist and hand still very feeble. Shoulder muscles seem more wasted.

26th.—Much better. Extensors of wrist more powerful, and also extension of elbow.

May 11th.—Shoulder stiff, and head of humerus appears more prominent posteriorly; there is marked click on attempting each rotation. No more improvement in wrist extensors, but triceps stronger. Biceps shows no gain. There is definite trophic change as shown by the bluish hand, which is smaller and colder than the opposite one.

CASE 9.—Mabel F—, æt. 10 months, came to me at the Children's Hospital on March 23rd, 1897, and the following history was given. At three days old the right arm was noticed to hang down and to be twisted; there was no flexion at the elbow, and the shoulder did not move. In fact, there was very little movement about the arm for some weeks, and after that there has been gradual improvement. When first seen by me the muscles of the shoulder appeared distinctly wasted, and the arm was rotated inwards. The shoulder was rather stiff, and the head of the humerus was a little prominent posteriorly, due to the wasted deltoid. Clavicular fibres of the pectoralis major are wasted, but the lower fibres and the teres major and subscapularis are normal. Both the serratus magnus and infra-spinatus are paralysed. Flexion at the elbow-joint is now good, and forearm muscles are strong. Neck muscles are normal, sterno-mastoid not shortened.

Up to this period no treatment had been adopted, but

now galvanism twice a day with rubbing, and strychnine and iron internally were prescribed. She was the third child, born at full term. Labour difficult, cranial presentation, and instruments used: child much bruised. First child was a difficult birth with instruments and arm paralysed (*vide* below): second child also forceps used, but arms all right.

CASE 10.—Alice F—, æt. 3 years and 10 months, and sister to the last, was seen March 26th, 1897. The right arm was paralysed at the birth, and was in typical position, but fingers could be moved. Now the humerus is internally rotated, and there is slight flexion at the elbow-joint. There is slight stiffness about the shoulder, but there is some abduction. Lower part of pectoralis major and internal rotators well developed. Very slight power of external rotation, and these muscles are poorly developed; the serratus magnus is very weak, so that there is distinct “winging” of scapula. Biceps and supinators quite large, so that flexion of elbow and supination of forearm good. Rest of the muscles normal. The whole arm and hand distinctly smaller than on left side.

The birth, as stated before, was difficult, and this was said to be due to the shoulders. There was a great deal of bruising about the head, but not the neck.

CASE 11.—Alfred M— was brought to me on April 15th, 1892, at the Children's Hospital, Shadwell, at the age of 2 months. He was the third of five children. His birth was very difficult—“cross-birth,” and he was delivered feet first; no instruments were used. They were necessary with the first child, but not with the others.

A few days after his birth it was noticed that there was a bump on the right side of the neck, and that the left arm was paralysed.

When seen by me there was an induration in the middle of the right sterno-mastoid. The left arm hung down quite useless, “like a flail,” and the arm was twisted in. There was no muscular action of deltoid, external rotators of shoulder and biceps, and the triceps seemed weak. The fingers could be moved.

The child was treated with rubbing, and after a few weeks disappeared. He was again brought to me in the summer of 1896, and I found that power had been completely recovered in the arm, external rotation and abduction of shoulder both being limited. The left hand was distinctly a bit smaller than the right.

CASE 12.—Lillie S—, æt. 6 weeks, was brought to me at St. Thomas's Hospital in December, 1897.

The left arm was characteristically rotated inwards. The triceps and forearm muscles acted normally, but the biceps was wasted. The shoulder was stiff, and the head of the humerus rather prominent posteriorly.

She was the third child. The first two were born without any difficulty, but in this case the head was born some twenty minutes before the shoulders.

CASE 13.—Amy L—, æt. 5 weeks, came to my out-patients' room, Shadwell, on May 27th, 1898. She was the tenth child, of which eight were alive; none of the others were similar. It was a difficult birth, and instruments were used. The presentation was cranial; she was a large baby. The next morning there was noticed dropping of the right shoulder, and the arm hanging useless with the hand twisted inwards. The arm was kept bandaged across the chest. After the end of five weeks the arm was seen to be in the usual typical position, without any stiffness at the shoulder. The biceps was not wasted, and the triceps acted well. After three months the biceps was of good bulk and acted well. There was some fixation of the shoulder, but the mother thought it was improving.

CASE 14.—Annie H—, æt. 10 months, was brought to the Children's Hospital, Shadwell, on May 27th, 1898. She was the second child, born at the seventh month. The birth was difficult, and presentation breech; the doctor who attended had to make traction on the arms to deliver the head. The first child was also born at the seventh month, but the presentation was cranial, and the birth straightforward; it was badly nourished, and did not long survive.

On examination the muscles about the left shoulder appeared wasted, and the arm was rotated inwards. The shoulder-joint was rather fixed, and the scapula was somewhat drawn up by the trapezius; the clavicular part of the pectoralis major was wasted. There was slight power of flexion at the elbow-joint, but the biceps could not be felt; the triceps was weak. The muscles of the forearm seemed normal. No treatment had so far been adopted, so the child was ordered massage and galvanism.

CASE 15.—Sarah B—, æt. 8 months, was brought to me at the Children's Hospital, Shadwell, in April, 1892, for want of power in the arms. There was marked rotation inwards of the arms, and pronation of the forearm on both sides, so that the forearms looked outwards. The shoulders and arms were very wasted. The clavicles appeared short and the heads of the humeri projected backwards, but still in rotation with the glenoid cavity. There was very little movement to be obtained at the shoulder-joint. The deltoid and spinati were quite wasted, and the humerus was drawn tightly into the side, and rotated inwards by the teres major. There was very poor flexion at the elbow, owing to the paralysed and wasted biceps, but the extension was good. The muscles of the forearms and hands were well developed and active.

The child was a twin, and was born sixteen hours after the first. The position was transverse, and the child had to be turned and delivered by the feet. There was difficulty in bringing down the arms, and the arms and shoulders were bruised. The arms were noticed flaccid and helpless from the birth. The other child died, but was quite perfect. Galvanism ordered, and rubbing with liniment; strychnine and iron given internally.

CASE 16.—Ellen C—, æt. 11, came to me at the Children's Hospital, Shadwell, in May, 1894. After the child's birth it was noticed that the arms were twisted inwards, and the hands pointed backwards and outwards, and that the limbs were powerless. The arms looked quite natural, no difference being apparent in development of muscles of

shoulders and forearms; very soon the shoulders were found wasted.

FIG. 2.



CASE 16.—Ellen C.—. Showing wasting of muscles about the shoulder-joints and the flexion and fixation of the hands.
(From a photograph by the author.)

She was the third child, and was born at full term after a tedious confinement. The presentation was cranial, and no forceps were used. Afterwards the child seemed “to have a very long neck, which was quite wobbly.”

On examination the shoulders and arms were very poorly developed. On the right side the inferior angle of the scapula points backwards, the bone itself being very small. No deltoid, supra-spinatus and infra-spinatus, or teres major to be made out; no power of abduction or of rotation outwards; clavicular part of trapezius and lower part of pectoralis major present. There is very slight action of triceps, but no biceps can be made out, the slight flexion being caused by pronator radii, teres, and other forearm flexors. The forearms were pronated; no supinator longus. The wrists were semi-flexed and fixed, and no wrist extensors to be made out. Hand very small, no alteration in position of fingers, which could not be separated, or flexed, or extended. The hand was cold, with signs of old chilblains to be seen; skin of fingers rather shiny. General sensation apparently not blunted. The left arm was much the same as the right side, but no elbow-joint flexion; no latissimus dorsi, but a little more action of triceps.

CASE 17.—Marian A—, æt. 5 months; Shadwell, June 28th, 1892. She was the second child, born in a “caul;” labour seemed natural and not unduly prolonged. The first child had to have instruments used. After birth the arms were noticed to twist in, especially the left one. There was marked wasting about the shoulders, and the heads of the humeri were more prominent posteriorly than usual; the joint capsules were very lax. She could grasp objects with the hands. The neck was very “wobbly,” but although the muscles appeared very flabby, there was no indication of any local lesion in the neck. The child was the victim of congenital syphilis, and had general wasting. She was admitted to the hospital with broncho-pneumonia in November, and died.

At the autopsy the shoulder-joints were carefully examined. The joint surfaces were quite healthy and of proper shape, and the muscles round seemed yellowish and fatty and rather wasted.

On considering the cases described before, it will be noticed that the position of the arm is absolutely typical;

there is marked inward rotation of the humerus with pronation of the forearm, so that the palm of the hand looks outwards. When the infant is first seen, which is usually some few weeks after birth, there is some flattening of the shoulder and want of fulness of the upper arm, without any alteration of the size of the forearm. On examination the child will be noticed to keep the shoulder fixed, and not to flex the elbow, and it will be found that this fixation is due to muscular contraction, which in the early stages can be passively overcome. The deltoid, supra-spinatus, infra-spinatus, teres minor, biceps, brachialis anticus, and supinator longus muscles are paralysed, and so the characteristic position is produced by the unbalanced action of their antagonists.

If we now refer to the appended tables¹ the muscles involved are seen to be those supplied by the highest fibres of the brachial plexus; in fact, as a rule they are only those associated with a lesion of the fifth and sixth cervical nerves. This particular grouping of paralysed muscles was first noted by Erb in 1874, and is known by his name, and was referred by him to a lesion about his motor point.

Table of nerve-supply of arm and shoulder muscles.

From 4th cervical—Levator scapulæ, trapezius.

From 5th cervical—Levator scapulæ, rhomboids, serratus magnus, supra-spinatus, infra-spinatus, teres minor, subscapularis, deltoid, biceps, brachialis anticus, ? pectoralis major, ? teres major.

From 6th cervical—Serratus magnus, ? supra-spinatus, ? infra-spinatus, ? teres minor, subscapularis, teres major, deltoid, pectoralis major, biceps, brachialis anticus, pronator teres, flexor carpi radialis, supinator longus and brevis, extensores carpi radiales, abductor, opponens, and flexor brevis pollicis.

From 7th cervical—? serratus magnus, pectoralis major and minor, latissimus dorsi, ? teres major, coraco-brachialis, triceps, anconeus, flexor sublimis digitorum, ? flexor profundus digitorum, ? flexor longus pollicis, ? pronator quadratus, extensores radiales, extensors of digits, extensor carpi ulnaris, ? abductor, ? opponens, and ? flexor brevis pollicis.

From 8th cervical—Pectoralis major and minor, latissimus dorsi, triceps, anconeus, flexors of digits, flexor carpi ulnaris, pronator quadratus, adductores pollices, interossei, abductor flexor brevis, and opponens minimi digiti.

From 1st dorsal—Pectoralis major and minor, flexors of digits, flexor carpi ulnaris, pronator quadratus.

¹ Quain, vol. iii, pt. 2, p. 354.

If we refer to Herringham's table,¹ which traces back the nerves to their origin, we note the following which concern the innervation of the muscles involved :

From the outer cord—

- Exterior antero-thoracic traces back to 6th and 7th, 5th?
- Nerve to coraco-brachialis, to 7th.
- Musculo-cutaneous, to 5th and 6th.
- Outer head of median, to 6th and 7th.

From posterior cord—

- Upper subscapular, 5th and 6th.
- Lower subscapular, 5th ? and 6th.
- Circumflex, 5th and 6th ?
- Musculo-spiral, 6th, 7th, 8th.

The abductors of the shoulder are innervated by the fifth cervical root, and the adductors by the sixth and seventh; the flexors of the elbow are supplied mainly through the fifth and sixth cervical nerves, and the extensors through the seventh and eighth; the extensors of the wrist predominate in the seventh, and the flexors in the eighth cervical and first dorsal nerves.

In nearly all the cases the lesion is a limited one, and only involves the muscles before mentioned. Jacquemier states that the only muscle paralysed may be the deltoid. Alterations in sensation in such young children are impossible to determine.

After a while the wasted deltoid allows of prominence of the humeral head, which is drawn to the back part of the glenoid fossa by the unbalanced teres major and latissimus dorsi, the scapula at the same time being pulled forwards by the pectoralis minor: later there is considerable stiffness, due to the contracture of the unopposed intact muscles. Cases of more extensive damage seem unusual, but in some of my cases this has happened. The triceps and extensors of the wrist supplied by the musculo-spiral nerve, and dependent on the integrity of the seventh nerve, may be affected, leaving the elbow-joint quite frail, as in Case 16 (Ellen C—). Here apparently only the flexors of the wrist and fingers have escaped, and the sequel has been marked contracture of these muscles, causing their permanent shortening and irremediable fixation of the wrist-joints. In Case 1 (Agnes B—), where

¹ "The Minute Anatomy of Brachial Plexus," 'Proc. Royal Society,' xli, 1886.

the triceps was wasted, there was great weakness of the serratus magnus causing winging of the scapula, and also weakness of the flexors of the second, third, and fourth fingers. Case 8 (Richard W—) showed no power of extension at the wrist, with unbalanced contraction of flexors and weak thumb extensors—all explained by a lesion of the seventh nerve. There was also loss of radial flexion of the wrist (supplied by sixth nerve), with marked tilting to inner side. The involvement of muscles in these cases seems to be in accord with the recognised nerve-supply as found experimentally, but it must be remembered that where even seeming discrepancies crop up such may not be the case when we bear in mind the variations in the formation and distribution of the brachial plexus.

Cases¹ have been described where from the oculo-pupillary changes on the paralysed side (*i.e.* pupil smaller in diffused light, and very little dilated by atropine, and eye appearing smaller from narrowing of palpebral fissure), and the extensive muscular paralysis, the eighth cervical and first dorsal roots must have been damaged.

As to the exact position of the lesion producing this combination of paralysed muscles opinions have differed. Hoedemaker considered the upper trunk of the brachial plexus the site, and Bernhardt² the fifth nerve immediately after its exit from the intervertebral canal. Erb³ himself says the lesion is where the fibres of the circumflex, musculo-cutaneous and musculo-spiral are close together, *i.e.* at the site of his "motor point," situated a little external to the outer border of the sterno-mastoid, and arising from the fifth or sixth cervical roots or their combined trunk. A difficulty in locating the Erb combination by some has been the involvement of the supinators supplied by the musculo-spiral. The latter, according to Herringham, gets fibres from the sixth root, and the fibres to the supinators may be traced back to that, so that the original and modern observations can be harmonised. Accepting, then, that the lesion is in the upper trunk or the fifth and sixth nerves, it is very

¹ Seeligmüller, 'Berl. klin. Woch.,' 1874, Nos. 40 and 41.

² Bernhardt, 'Zeitsch. f. kl. Med.,' 1882, Bd. iv, p. 415.

³ Erb, von Ziemssen, 'Pract. of Med.,' vol. xi, p. 528.

evident, if in the former, it must be immediately after the junction of the two roots, because of the early origin of the supra-scapular nerve. In the other direction the relation of the lesion to the origin of the nerve to the rhomboids and posterior thoracic nerve may help, the former and the upper root of the latter arising in common close to the intervertebral notch. If the lesion be in the neighbourhood of the upper trunk these filaments would not be implicated; but if the lesion, as is held by many in exactly the same traumatic lesion of the plexus in adults, is in the foramina, then these nerves presumably could not escape. The evidence of a lesion of the nerve to the rhomboid in infants is difficult to determine, for elevation of the shoulder remains because the levator scapulæ is intact: if the vertebral border and inferior angle be farther outwards than on the sound side, this may be suggestive; but we must set off against this that the pectoralis minor, through the failure of other muscles, unduly contracts, dragging the scapula forwards. Guillemot,¹ who examined a great many of his quoted cases in adult life, found the scapula raised on the affected side in nearly every one, and this he attributed to paralysis of the lower part of the trapezius, due to the branch going to the subtrapezial plexus being stretched. We may infer from the observations of this same writer that he would place the lesion through the anterior roots close to the spinal cord, for he says as a rule there is little or no anæsthesia [in babies soon after the injury this is almost impossible to determine, and in the adults he examined the sensations could easily have returned through other nerve channels], and that during the traction the neck forms a concavity backwards, so that the posterior and sensory roots of the cervical nerves suffer much less traction. In some of the cases of extensive muscular weakness we should expect some temporary loss, particularly in the circumflex area. Henoeh² states that he has noticed sensory disturbances. Hoedemaker,³ in observing older

¹ 'Annales de Gynéc. et d'Obstét.,' January, 1897.

² Henoeh, 'Diseases of Children,' New Syd. Soc., vol. i, 245.

³ Hoedemaker, 'Arch. für Psychiat.,' Bd. ix, 1878-9; Ross, 'Diseases of Nervous System,' vol. i, 589.

patients with Erb's palsy, met with formication and numbness over the outer surface of the arm and forearm, as well as in the thumb and index finger, which sensory disorders soon disappeared. Erb himself says that the sensibility does not appear to be materially impaired.

Effect on nutrition.—It is a matter of common knowledge that for the muscles to preserve their power and bulk the cells of the anterior horn and the nerves from them should be intact. In such an injury of nerves as we have been considering it is not surprising that there is interruption, temporary or permanent, to the trophic influence of the cells over the muscles. As in any case of infantile paralysis, we have loss of power accompanied by wasting and loss of reflexes. The anterior horn region also exerts a trophic influence over bones and joints.

Most of my cases show that in addition to the wasting of muscles there are undoubted signs of defective bone growth, as evidenced by shortening of the limb. I have noticed that this shortening in most cases is confined to the humerus, and is accompanied by smallness of the scapula on the same side. This is easily accounted for, in that the muscles about the shoulder are usually the most wasted. This associated bony change admits of two explanations: the one that this trophic influence is exerted on the growth of bone, and thus these higher bones of the shoulder girdle are dependent particularly on the integrity of the fifth and sixth nerve-root areas; the other (and for this suggestion I am indebted to my colleague, Dr. Turney) that the growth of bone proceeds only *pari passu* with the amount of support it has to give to its attached muscles. Whichever of these views is correct—and the latter seems very feasible—we notice the most obvious shortening in the vertical length of the scapula and in the humerus. The same state of affairs may be seen, and admits of the same explanation, in a typical infantile paralysis case of the Erb type. Besides the shortening of the upper arm, the forearm and hand may be smaller, and in many of these cases there was marked wasting of the forearm and hand muscles. In two certainly it was not the case, which might lend some support to the first view. In the most severe cases the hands were also cold and blue,

and the skin shiny, but probably disuse fully accounts for this association.

Electrical reactions.—In these young babies it is generally admitted that any changes are difficult to elicit. Dr. Turney examined two of these soon after birth, and could find no electrical change instead of a diminution or complete disappearance of nerve excitability. Erb says the electrical excitability is diminished, and Duchenne agrees with him.

Causation.—The lesion without any doubt occurs during the birth of the child, and on critically examining the history of cases it will be seen to be met with under many different conditions. Our obstetric text-books curiously have very little to say on such an important subject. “To be forewarned is to be forearmed,” and if to this matter attention were directed in these works no doubt the injury might be prevented in some cases, or at any rate recognised immediately after birth, so that steps might be taken to repair the damage, and, what is more practical, prevent the erroneous diagnosis that has so often been made. Galabin makes very scanty reference to it, and in the text-books of Playfair and Lusk it is not mentioned. Herman¹ says injuries may happen in breech presentations in pulling the head through, and the fingers above the clavicles may cause paralysis. Norris,² in speaking of rupture of the sterno-mastoid muscle, which he says most usually occurs on the right side, states that paralysis of the arm may correspond with the injured side sometimes; also that injury to the nerves may be produced in attempting to deliver the arm.

The first observations that were made about this paralysis attributed the lesion to the application of the forceps, the blades directly gripping the neck and so bruising the nerves. Smellie reports a case of bilateral paralysis of the upper limbs considered due to this cause, but the first observation supposed to be definitely in confirmation of this was made by M. Danyan in 1851.³ The child here soon after its birth was noticed to have facial palsy with paraly-

¹ Herman, ‘Midwifery—On Difficult Labour’ (p. 60).

² Norris, ‘American Text-book of Obstetrics,’ p. 825.

³ Danyan, “Paralysie du membre supérieur chez le nouveau né” (‘Bulletin de la Société de Chir.,’ 1851).

sis of the left arm, and on the left side of the neck was a deep slough caused by the forceps blade ; at the post-mortem the nerves of the brachial plexus were found much bruised. M. Guéniot in 1867 published a case similar to the above, but without any facial palsy.

On investigating many cases of this paralysis it was noticed that the same result was produced without any direct bruising over the nerves. Duchenne¹ recognised that the lesion might occur in such obstetric operations as disengaging the upraised arm in a breech or footling presentation, or in delivering after version, or in making traction on the arm after the birth of the head. In support of this he quotes cases "in one of which in prolonged labour the body was extracted by hooking the finger in the armpit, and in two others, breech presentations, after the birth of the body, there was difficulty in bringing down the arms, which are always raised in such cases."

In the majority of cases a history is given of some difficulty in the labour, in many artificial means being adopted to effect the termination of the same.

On studying my own series of seventeen cases it will be noticed that the details of the labour show great variation. In only one case is the birth spoken of as normal, and here the child was "born in a caul," and both shoulders were affected ; she was the second child, and, as at the first confinement, forceps had been used, there probably was some pelvic narrowing.

All the other cases had a definite history of the birth being tedious and difficult. In eleven the presentation was cranial ; of these seven were born naturally, but in three special mention was made of difficulty in delivering the arms ; the other four had forceps applied. The presentation was breech in two ; in the first (Case 8) there was difficulty with the right arm, which was extended above the head, the left arm having come down some two hours before ; no forceps were used to the after-coming head. In the second (Case 14) the doctor is said "to have had to pull on the arms to deliver the head." In one footling case forceps were used to the after-coming head. In one case of version

¹ Duchenne, New Sydenham Society, p. 210.

special trouble was met with in bringing down the arms, and one was a "cross-birth."

From the analysis of the above cases it is very evident, from the many obstetric procedures giving rise to the same condition, that the original view of direct pressure by forceps becomes untenable. What strikes one forcibly is the oft-recurring statement that there was "difficulty in delivering the arms," or "for the shoulders to be born." Difficulty in delivering the arms may arise in a breech or footling presentation, or after version, where they are extended up by the side of the head. During the manipulations effecting rotation and bringing down the arms, actual injury to the humerus, fracture of its shaft or separation of its upper epiphysis, may occur; considerable pressure may be exercised directly on the neck structures, or there may be traction on the nerves of the brachial plexus.

We must bear in mind, however, that the lesion may occur in ordinary cranial presentations without any manipulation at all, and where certainly direct pressure does not come in. Pelvic contraction has to be reckoned with, and lesions in more than one member of a family or many difficult births point in this direction. Now it is usually assumed that when the compressible head can pass through the maternal canal there is no further impediment to delivery, unless there is some pathological condition producing dystocia. Acting on this assumption, it is not sufficiently allowed that there may be trouble with the shoulders. Sir J. G. Simpson¹ has shown that the heads of boys are larger than those of girls, *i. e.* that the heads of the latter would not dilate the way for the shoulders as effectually as in the case of the former. Some weight may be lent to this argument from my own cases, for of the seventeen thirteen were girls.

Roullard² makes the following propositions:—(a) where labour is natural and the biacromial diameter with difficulty engages the maternal channel this diameter is reduced, the shoulders ram down, the clavicles are drawn closer together, and are carried backwards so that the middle part compresses the fifth and sixth nerves against the transverse

¹ Lusk, 'Science and Art of Midwifery,' p. 165.

² Roullard, 'Thèse de Paris,' 1887.

processes of the sixth and seventh cervical vertebræ; (b) with the after-coming head there is direct pressure on the neck by the forceps or fingers, and as the index is more powerful than the third finger, the side of the former should be affected; (c) in the case of the upraised arm there is the same direct pressure on Erb's point. Although Roullard's views were accepted by M. Budin, they fall considerably short of the truth.

For some time, from a consideration of my earliest cases, I felt convinced that there was a common factor at work which would explain the lesion however produced, namely, traction on the neck causing increased tension on the nerves entering the brachial plexus between the spinal cord and the clavicles. Fieux¹ expresses exactly the same ideas in a recent paper criticising Roullard's views, which had been generally accepted. He says if the mechanism in (a) be true, the space between the middle of the clavicles and the vertebral column should be increased; that in (b) this accident would be difficult to produce, as the diameter of the neck does not exceed two inches, and, if the beak of the forceps grip the head, by slipping they could not damage the neck; lastly, he thought any pressure just above the clavicles would compress the nerves too low down to produce the typical paralysis.

Traction on the neck being the required explanation, the lesion may be produced by movements in which the head is tilted to one side or the other. Fieux shows that the brachial plexus is in the form of a cone with its apex at the top of the axilla; the fifth and sixth cervical nerves come off 35 to 40 mm. above the base of the neck, the seventh nerve 28 mm. and the eighth cervical and first dorsal nerves 10 to 20 mm.

If the head is tilted laterally the upper part of the cone is stretched on especially, and in a dissected foetus it can be proved that the nerves are stretched tight like violin strings. Thus the fifth and sixth cervical nerves may be either strongly stretched or even torn away from the spinal cord, and the grouped paralysis of muscles which we regard as typical produced.

¹ 'Annales de Gynéc. et d'Obstét.,' January, 1897.

This explanation can be now easily adapted to the different conditions in which the lesion occurs.

In a cranial presentation, when the head is born the shoulders are still in the pelvis and rotate with the restitution of the head; if there is hindrance to the shoulder sweeping under the pubic arch, or any lateral pressure made, the neck may be stretched. Such a manipulation is not unlikely to be adopted by ignorant midwives in their efforts to speedily terminate the labour, and may account for some of my cases. After the head has entered the brim, should the shoulders fail to follow readily it is inevitable that there be stretching on one or other side of the neck.

In footling and breech presentations such an accident might easily arise where the arms are extended by the side of the head. If the first arm be freed, to bring down the second often entails traction on the first and rotation of the trunk, both of which manipulations with a fixed head render such damage probable. Again, in dealing with the head itself it may arise from the traction and twisting that occur whether the forceps or the fingers are used. Erb considered that the paralysis was due to the energetic use of the so-called Prague grip, where the fingers are applied like a fork over the back of the neck, endangering the brachial plexus by compression and traction.

Guillemot¹ describes a number of cases that came under his notice where the children were all extracted by the feet and by the same midwife. He had reason to believe that often podalic version had been done and extraction attempted without complete dilatation of the *os uteri*. It must be borne in mind that the head can only be turned with safety a quarter of a circle, any twisting beyond this causing traction on the nerves.

In a shoulder presentation the head remains above the brim, and during the uterine contractions there would be necessarily considerable traction on the neck structures, especially if spontaneous evolution with this presentation should occur, which may happen should the child be immature.

Diagnosis.—(1) The affection for which this condition is

¹ 'Annales de Gynéc. et d'Obstét.,' January, 1897.

generally mistaken is congenital dislocation of the humerus, a confession which the writer can make respecting his first case, but with the certain knowledge that he has erred in good company. With reference to the congenital dislocation it must be an extremely rare condition, for at no Society nor in many years of hospital work have I seen an undoubted case.

Guérin¹ makes three varieties: (a) dislocation of the head downwards,—but this he acknowledges was a paralytic case, so it must be excluded; (b) downwards and inwards; (c) subluxation upwards and outwards, seen in a foetal monster. Malgaigne and Roux, commenting on these cases, did not confirm Guérin's observations, the latter declaring "he had never seen a congenital dislocation of the shoulder." Robert Smith agrees with Guérin as to two of his groups, the displacement forwards and that backwards. Of the first group he says he has seen several instances, and every clinician can agree with him, for those which he gives in illustration are the most straightforward cases of paralysis. Over one, however, there is some doubt, but the evidence here does not stand too strict a criticism. In his second division, the subacromial or subspinous, he says he has only seen one case in a woman of forty-two, where there was no normal glenoid cavity, and this one has been quoted over and over again from book to book.

In recent text-books the allusions to this subject are of the most scanty nature. Erichsen² simply quotes Smith's observations. In Heath,³ Guérin's and Smith's cases are referred to, and the writer, without adding any further evidence to justify his inference, remarks that they are probably less rare than is supposed. In Holmes and Hulke⁴ the subject is not mentioned. In Treves' System⁵ it is stated, "This deformity may be confounded with traumatic luxations or separation of upper epiphysis. It is commonly symmetrical, occurring in any direction, but the

¹ Hamilton, 'Fractures and Dislocations.'

² Erichsen, 'Science and Art of Surgery.'

³ 'Heath's Dictionary of Surgery.'

⁴ 'System of Surgery.'

⁵ Treves, 'System of Surgery,' vol. i.

subcoracoid is the most frequent. The muscles round the joint are usually paralysed, capsule weak and elongated. The bones are altered and ill-formed." Here, again, no cases are referred to in support of the statement, and the remarks expressed would suggest very much reference to a paralytic luxation, and not to true congenital dislocation.

From the above it will be gleaned that Smith's case of displacement backwards is the only one that has any *locus standi* up to the present date. One of my early cases (Marion A—), which was fatal, suggested a little, from the prominence of the humeral heads posteriorly (which was not, however, very marked), such a form of dislocation, but in addition the muscles were decidedly paralysed and wasted. At the autopsy the glenoid cavities and humeral heads were perfectly formed. Whether in a very young child one could tell might be doubtful, but the extreme internal rotation of the humerus and pronation of the forearm would suggest it at once, apart from the marked feebleness of the muscles about the joint.

(2) From a traumatic dislocation many of the objections previously stated would distinguish it. Such an accident is very unlikely, separation of the upper epiphysis being much more easily effected.

(3) From separation of the upper humeral epiphysis the position of the paralysed limb is distinctive. The upper epiphysis at birth is entirely cartilaginous; if separated from the diaphysis there need be no displacement, or, if there should be, the anatomical position of parts would resemble a fracture through the surgical neck, the axis of the humerus being directed upwards and inwards, and the elbow away from the side.

(4) From infantile paralysis: if seen directly after the birth it would be most improbable; if the child be first seen after a few months with evidence of the Erb combination, it is a question of carefully going into the history.

(5) From brachial monoplegia. Here we might expect some history of asphyxia neonatorum directly after birth, with perhaps unconsciousness and convulsive movements. Any paralysis would not be of the Erb type, but more widely

distributed : afterwards spastic contraction would be met with.

Prognosis.—The most important factor in the prognosis will be the amount of the paralysis. Experience would almost make one doubt whether any case recovers without some muscular impairment, and it is quite certain that if the paralysis is extensive there will be permanent loss of power in groups of muscles and wasting of the limb. This I state without considering the treatment, which, if appropriate, does influence recovery. There is generally then still to be made out the abnormal inward rotation of the limb, and the weakened deltoid preventing normal abduction ; in fact, the deltoid is the last to recover, as it is also the most severely attacked. Erb says the prognosis is not favorable, and in neglected cases they often do not recover at all.

Treatment.—Hench expresses rather pessimistically that there is nothing to be expected from treatment except in the early stage. This is substantially correct ; but although we do not see the cases usually until a few weeks after birth, I do not think we can act on his statement and be passive entirely. Directly after birth it is better perhaps not to be more active than to keep the arm lightly bandaged to the side to allow of repair going on, and at the same time overcome the inward rotation. After about three weeks rubbing may be used and passive movements made, the arm in the intervals being kept to the side. These movements are most important, as thereby the secondary contracture is overcome, and the stiffness prevented. I always employ galvanism, and have had very fair recoveries, and Hench and Erb use this : Duchenne, on the other hand, advocates faradisation.

MUSCULO-SPIRAL PARALYSIS FROM CONTRACTION OF THE TRICEPS.

By H. G. TURNEY, M.D.Oxon., F.R.C.P.,

ASSISTANT PHYSICIAN, AND PHYSICIAN IN CHARGE OF THE ELECTRICAL
DEPARTMENT, ST. THOMAS'S HOSPITAL.

LESIONS of the musculo-spiral nerve constitute a considerable proportion of the peripheral nerve lesions seen in an electrical department. Setting aside the cases in which the trouble is due either to lead or alcohol, the rest may be considered as almost without exception of mechanical origin. A few of these are cases of crutch palsy, but the majority fall under the description of Sunday morning paralysis. The patient goes to bed intoxicated on the Saturday night, and wakes up with loss of power in the musculo-spiral area of one or other arm. He probably does not remember having gone to sleep with the limb folded beneath him, but that fact is not surprising, and does not weaken the diagnosis. Both the cause and its effects are monotonous, and need no further notice.

But from time to time paralysis of the musculo-spiral nerve occurs of undoubted mechanical origin, and yet less easy to explain. Of such the following may be quoted as examples.

P. G—, æt. 34, is a soldier by trade, and has always been strictly temperate in his habits. On May 14th, that is about six months before he came under observation, he fell

off his bicycle, alighting with his outstretched arm on his left wrist. This was bruised, but so far as can be made out was not seriously injured. He is quite certain that he sustained no injury to the upper arm or elbow, and that all the damage was limited to the hand and wrist. There was no laceration of skin to speak of, and no injury to bone was detected. He did not lose his senses at the time, and was quite sober. When his wrist had recovered itself and he tried to use his hand he found that it was helpless, owing to the dropping of the hand and fingers. No splint was used, and the bandage did not extend above the lower end of the forearm. He has had no pain, and his health has been unaffected by the accident, but the paralysis just described has remained without any sign of improvement.

On examination the patient is a powerfully built man with no sign of visceral disease. With the exception of the loss of power in the muscles of the left forearm, he shows no signs of disease whatever. The common extensor group on the back of the forearm is considerably wasted, and the supinator longus is similarly affected. There is no change in the muscles of the hand and no trophic alteration in the skin. Neither muscles nor nerves are tender. All the muscles supplied by the median and ulnar nerves function normally. On the other hand, those which derive their nerve-supply from the musculo-spiral are completely paralysed, with the exception of the triceps. Extension of the forearm on the upper is normal. Flexion of the forearm is very weak on account of the paralysis of the supinator longus, and the power of supination is almost abolished. The thumb cannot be extended, but both adduction and apposition can be performed. The fingers are incapable of extension, though if the proximal phalanges be supported the two distal can be brought into the straight line. The grasp is weak, but if the function of the extensors be artificially compensated the flexors regain their power. The strongest faradic current that can be applied produces no contraction, while to the battery current there is both qualitative and quantitative change with marked sluggishness of response. (A.C.C. > K.C.C.; A.C.C. occurring at 2.5 ma., K.C.C. at 4 ma.) There is no affection of

sensation. Both joint surfaces and tendons are quite free, as shown by passive movements. The back of the hand shows the characteristic prominence of musculo-spiral paralysis. An examination by the X rays proves that there has been no osseous lesion either of the hand, fore or upper arm. It may be mentioned here as a point of some general interest that the prominence of the carpal region is due to the projection of the upper end of the os magnum, but whether this is always the case under similar circumstances it would be premature to say.

The treatment consisted in the application of the alternating main current in a bath for twenty minutes daily. Patient was seen for the last time on July 30th, the treatment then having to be abandoned on account of his return to Ireland. There was then some improvement in voluntary power, both flexion of the forearm and extension of the wrist being possible, though with very little force. The electrical reactions showed a corresponding amount of change, irritability to the faradic current having returned, though still very much diminished.

Before entering upon any discussion as to the cause of the paralysis in this case, a second will be described, which seems to be of similar if not identical nature.

G. S—, æt. 37, a railway porter by occupation. Patient was first seen on July 20th, when he gave the following history of his illness. On April 6th, when he was putting on the brake of a railway truck, the handle recoiled. The brake was of an old model, and required considerable force to work it, so that when patient's hand slipped it flew back with great violence, and catching him in the palm, as he expresses it, "sprained the back of his hand." Since then he has lost power in the hand, which remains unaltered to the present time. He states that he is of strictly temperate habits, and that he has always enjoyed good health, except that three years ago he suffered for some time with a trembling of both hands, which the doctor told him was due to worry. There is no history of exposure to lead, and patient's surroundings appear to be healthy in every way.

On examination the patient is well built and has a healthy aspect. There is no sign of visceral disease. The teeth are fairly good, and there is no blue line on the gums. The reflexes both superficial and deep are normal, and there is no indication of nervous disease save in the right forearm and hand. The hand and fingers are in the typical dropped-wrist position, and the power of extension is reduced to vanishing point. On the dorsum is the usual prominence to which reference has been made in the preceding case. Unfortunately in this instance no use was made of the X rays to determine its nature. Neither muscles nor nerves show any trace of tenderness. Wasting is well marked in the affected muscles, the supinator longus being involved as much as any. There are no trophic changes in either skin or nails, and to passive movement both joints and tendons are perfectly free. The common extensors, supinator, and extensors of the thumb are the seat of well-marked electrical change. A contraction is obtained with the strongest currents only from the coil, while to the battery current the response is extremely sluggish, and is also quantitatively though not qualitatively altered. Sensation of every kind remains completely unaffected. The patient was treated by the electric bath in the manner already described. He was kept under observation for nearly a year, and improved to some extent, but when last seen recovery was only partial.

The similarity between these two cases with regard to the causation is very close. In both a violent and unexpected force applied to the hand formed the immediate precursor of a very severe type of musculo-spiral paralysis. It is to be noted, too, that the implication of the supinator longus in both cases suggests a mechanical rather than a toxic lesion. In neither case was any other serious damage done to the limb, and by the X rays it was possible to exclude with certainty any lesion of the bony structures which might be made accountable for the injury to the nerve.

It is hardly conceivable that the sudden shock to the limb should produce what may be called a concussion of the nerve on the analogy of *commotio cerebri*; and as the fullest extension of the arm cannot possibly lengthen the course pursued by the nerve, any damage to its fibres by stretching

or rupture is out of the question. From the fact that the branches to the triceps muscle escape while that to the supinator longus is involved, it is clear that the seat of the lesion must be in the middle third of the upper arm, where the trunk passes to the outer aspect of the humerus beneath the outer head of the triceps. In the absence of external violence the conclusion is inevitable that the nerve suffers from compression by the strongly contracted muscle. Gowers¹ mentions two cases in which he attributes the paralysis to this cause. "I have twice seen paralysis from a violent contraction of the triceps, once during the act of pulling on a tight pair of boots, and once from throwing a stone with violence. In each the nerve was at once completely paralysed; and in the second, in which the palsy was severe, a bruised appearance was observed over the lower part of the triceps."

Recently the subject has been very fully discussed by Gerulanos.² He reports a case of a man who developed a sudden musculo-spiral paralysis in consequence of the spade with which he was digging coming unexpectedly into contact with some hard object. The supinator longus was affected as well as the muscles supplied by the posterior interosseous nerve. The paralysis at the time was complete, but showed signs of improvement within a month, when the patient was discharged.

Oppenheim³ (quoted by Gerulanos) mentions two cases, one of which resulted from a violent throwing movement; the other occurred in a patient who in falling down a ladder tried to save himself with his outstretched arm. Gerulanos, apparently with justice, claims that two cases recorded by Remak,⁴ and considered by him as due to stretching of the nerve, should rightly be included under this category. In the one the immediate cause was a fall upon the outstretched arm, and in the other a self-inflicted blow upon the back of the hand with a heavy hammer.

In the paper to which reference has already been made

¹ Gowers, 'Diseases of the Nervous System,' 1886, vol. i, p. 72.

² Gerulanos, 'Deutsche Zeitschrift für Chirurgie,' Bd. xlvii, S. 1.

³ Oppenheim, 'Lehrbuch der Nervenkrankheiten,' Berlin, 1895, S. 290.

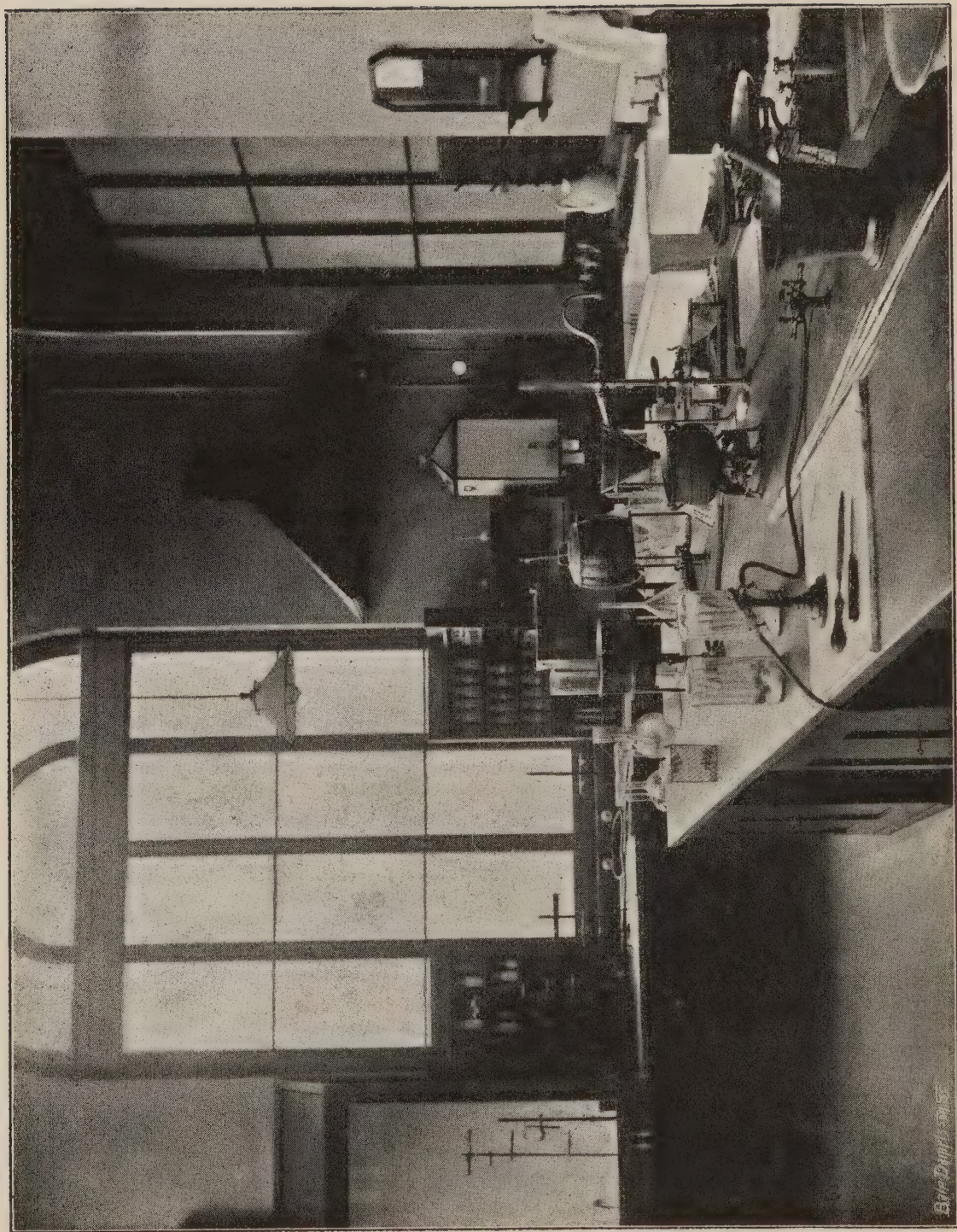
⁴ Remak, Eulenburg's 'Real-Encyclopädie,' Bd. xvi.

experimental evidence is given of the considerable degree of compression exerted by the muscle upon the nerve beneath it, and it is shown how normally the mobility of the nerve, amounting to about one centimetre in a vertical direction, allows it to slip aside when the muscle hardens upon it. It is only when the nerve is as it were taken unawares, and when the simultaneous action of the biceps impedes this movement, that any harm is done. In considering the anatomical conditions the only wonder is that this accident does not occur more frequently, at all events in a mild form, for the severe type of paralysis shown in the two cases recorded above is hardly met with except as a result of the grossest mechanical injury. Why it should have appeared in these two cases it is hard to say, for in the other records to which allusion has been made the results have been almost without exception of a transient nature.

The attempt to attribute the common incidence of certain toxic or unexplained paralyses in the musculo-spiral territory to frequently recurring damage of the nerve by the triceps seems, however, quite unreasonable. In the first place, the results of a mechanical injury to the nerve are different from those produced by the intoxications; in the one the supinator longus is paralysed, in the other it is not, and this difference is probably fundamental.

In the second place, the homologous nerve in the leg shows as great a proclivity to the intoxications, and yet it is not, so far as the writer is aware, liable to damage by the contraction of the muscles which cover it,—in fact it is, considering its position, singularly exempt from traumatic perils.

I must confess, therefore, that the study of this form of paralysis does not offer any satisfactory explanation of the tendency of the musculo-spiral nerve to degeneration; it calls attention to a special risk to which it is exposed, and to which but little attention has been given, but beyond that its importance does not appear to go.



Clinical Laboratory. South end. From a photograph by Mr. E. H. Cobb.

THE CLINICAL LABORATORY.

BY LOUIS JENNER, M.B.Oxon.,
SUPERINTENDENT.

THE desirability of having some central place for examining all morbid material from the operating theatres, and for carrying out such investigations for diagnostic purposes as cannot conveniently be done in the wards, had been felt for some time by the medical and surgical staff, and this has resulted in the building, by the Governors, of a special laboratory for the purpose. A room was built out on the wide leads above the old out-patient rooms facing Lambeth Palace Road, the entrance to it being in the first floor passage opposite Albert Ward.

The new laboratory measures 46 feet by 17 feet, and is lighted by seven windows, the whole design being architecturally in keeping with the rest of the hospital. A glass and wooden screen extending right up to the ceiling divides the room into two, the inner part being reserved for bacteriological investigations, and the outer being devoted to section cutting, the examination of urine, blood, fæces, and vomits, and to the preparation of culture media.

The flooring is of polished teak boards, and wide teak benches have been fixed round the three sides of the room in which the windows are placed, thus securing excellent light for microscope work. Every worker has, besides his own cupboard and drawer, a separate Doulton sink, hot and

cold water, gas, and electric light, both for lighting his work and for microscope illumination.

The centres of the rooms are occupied by very large teak-topped tables, underneath which numerous cupboards have been fitted. A fume chamber, autoclave, Koch's steamer, hot air steriliser, a wash-up sink, lavatory basin, bookcase, cupboards, and three Hearson incubators, fill up the rest of the wall space.

The laboratory has been placed under the charge of a superintendent, who is responsible for the work being done by four assistants; the latter are appointed from among senior students, the appointment being for the usual three months with the possibility of extension.

The work to be done consists in cutting all tumours, &c., removed in the theatres, incubating and examining all cultures from suspected cases of diphtheria, and examining sputum and urine for tubercle bacilli in those cases where a search in the wards has been unsuccessful; the estimation of hæmoglobin and enumeration of blood-corpuscles, serum reactions for typhoid, together with the examination of such urines, vomits, &c., as present any unusual features, also form part of the ordinary routine work. Research work, however, is not undertaken, as the laboratory was not designed for such a purpose, but solely for assisting diagnosis and completing the hospital record of each patient. Further, no examination of any kind is undertaken unless this has been ordered, and the order signed by a physician or surgeon, or one of the residents. The result of the examination is filled in on a printed form, and this is returned to the ward, to be eventually bound up with the notes of the case. It should be added that as regards the morbid material from the theatres the diagnosis of the microscope specimens is made by the curator of the museum, and his report is sent in once a week, while such macroscopic specimens as may be required for the museum are sent direct to him and do not come to the clinical laboratory at all.

THE NEW DEPARTMENT FOR PHYSICAL EXERCISES.

By E. O. THURSTON,
SURGICAL REGISTRAR.

THE difficulties attendant on the treatment of hospital out-patients suffering from lateral curvature of the spine, stiff joints, and other deformities, by proper mechanical exercise, have been long felt, and the unsatisfactory results of directing the use of certain exercises by the patients themselves either at their own homes, or in the case of young persons at the Board School gymnasiums, abundantly proved.

The re-arrangement of the Consulting rooms in the Out-Patients' department, however, gave the opportunity of securing a room which could be fitted as a small gymnasium, and the Treasurer and Governors on the advice of the Staff at once agreed to purchase the necessary apparatus, sanctioned the engagement of a skilled instructor to carry out a system of Swedish exercises for the lateral curvature cases, and the appointment of a clinical assistant to take charge of the department and superintend the massage and movement needed in cases of other descriptions.

Cases under treatment in the department remain under the charge of the Physician or Surgeon by whom they may be sent, reporting themselves at intervals in the general out-patients' rooms. At present the gymnasium is open twice weekly—at 3 p.m. for males, who as yet are in a decided minority, and at 4 p.m. for females. A large proportion of the female cases are of lateral curvature, and for

these a course of exercises on the Swedish system are carried out by Miss Nicodemi, the instructress.

Since the Department has only been in working order a few months it is difficult to say how large an amount of work will be done there, or in what direction it will prove most useful. The employment of the various machines has, however, given very gratifying results in the cases of stiff joints. The cases of lateral curvature under treatment have for the most part been of the very severe kind generally seen in the out-patients' department. In the slighter degrees marked improvement of the curvatures has been attained; in the severe, although no marked improvement in the extent of the curve has been obtained, yet pain has been relieved, the chest measurements have been increased, and general improvement in health and strength gained.

The following fixed apparatus has been erected, the machines being the manufacture of Mr. George Spencer, of 52, Goswell Road.

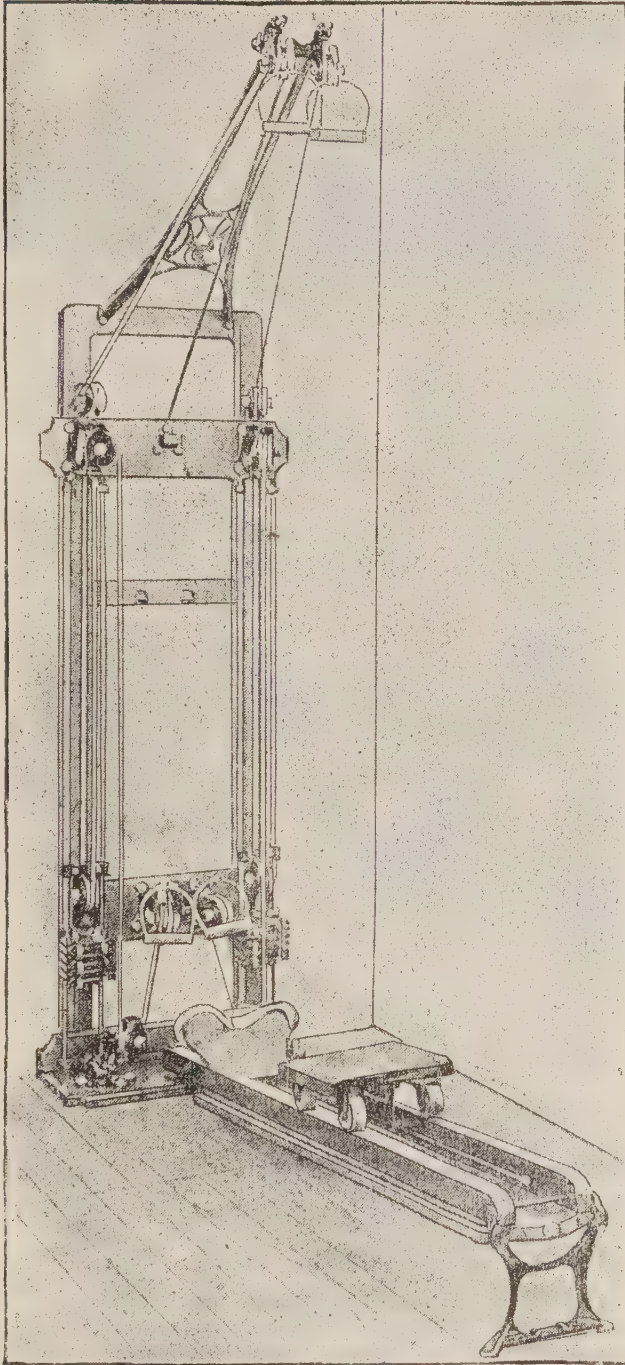
Two Sargent's combination pulley machines (Fig. 1). These consist of a series of pulleys and weights so arranged as to allow all the muscles of the extremities and the trunk to be brought into action. The weights consist of superimposed blocks of lead, one or more of which can be released at will so as to adapt the amount of work to be done to the strength of the patient.

The pulleys are placed at three levels: one overhead (pit-sawyer) for the upper extremities and intercostal muscles; a second at the level of the shoulders, especially for chest development; and a third at the floor (top-sawyer) for the muscles of the back and loin; to the last a foot attachment can be made for the exercise of the lower extremities.

Between the pulleys a back board is placed which can be used for support while making exercises with the face turned from the machine if necessary (Fig. 2). This board is also moveable and can be let down to the floor, when it furnishes a rowing board with sliding seat, which provides excellent flexor and extensor exercise for the hip, knee, and ankle joints (Fig. 1). The handle of the lower pulley may be attached to a pole fixed at the side of the machine, and a lateral paddling movement attained for the exercise of certain upper extremity and abdominal muscles.

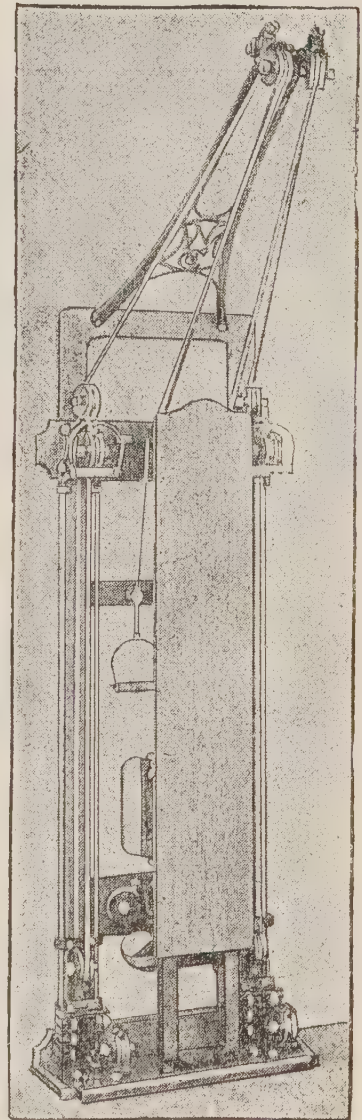
A modification of this machine is found in the Quarter circle, especially adapted for exercise of the abdominal muscles, but also useful for the chest, arms, and back (Fig. 3).

FIG. 1.



SARGENT COMBINATION PULLEY WEIGHT

FIG. 2.



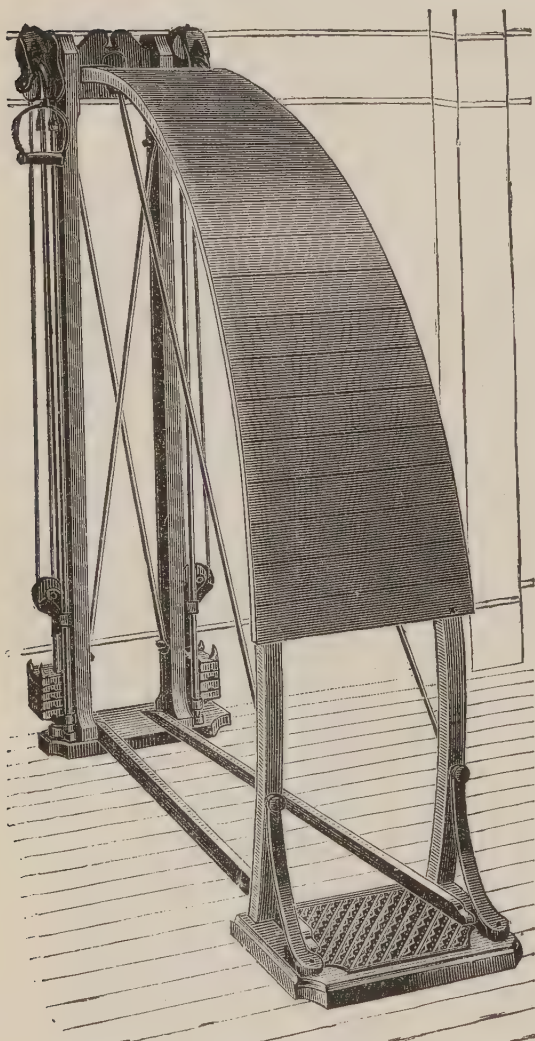
CHEST WEIGHT.

For the pulley exercises a number of Whiteley exercisers, in which an elastic cord takes the place of the weights in the Sargent's machines, have been provided in addition.

A special machine for flexion and extension movements of

the ankle consists of two treadles working on a horizontal axis. The patient sits on a small stool with the knees strongly flexed so as to eliminate any action on the part of the muscles of the thighs (Fig. 5).

FIG. 3.



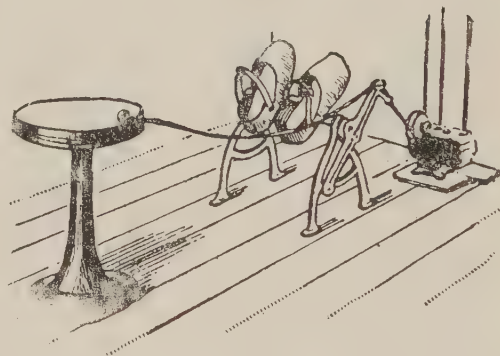
Quarter circle.

FIG. 4.



Wrist-roll.

FIG. 5.



The elbow and shoulder joints are mainly exercised with one of the pulley machines, but for the wrist a rounded wooden bar graduated into three thicknesses in its length, and working on an excentric, is provided (Fig. 4). The greatest circumference gives the most leverage, and is used when the resistance wanted is small. The total resistance can be increased by a screw, or a series of pulley weights can be attached.

Beyond these special machines the room contains a long horizontal bar, a trapeze, and couches for the exercises on the Swedish system especially devoted to the extension and rotatory movements of the spine, and for ordinary massage.

MEDICAL REPORT.

1897.

By A. E. RUSSELL, M.D., B.S.LOND., M.R.C.S., L.R.C.P.

TABLE I.—*General Statement of Medical and Surgical Patients.*

		Males.		Females.		Total.
Number of patients in Hospital, Jan. 1st, 1897	...	240	...	176	...	416
" " " Dec. 31st, 1897	...	217	...	167	...	384
" " discharged or died during 1897 :						
		Males.		Females.		Total.
Cured	...	2100	...	1477	...	3577
Relieved	...	792	...	687	...	1479
Unrelieved or other causes	...	283	...	173	...	456
Died	...	367	...	221	...	588
Total	...	3542		2558		6100
Average number of days of each medical patient's stay in hospital—26·66.						
" " surgical						23.

TABLE II.—*General Medical Statement.*

Number of Medical Beds ¹...		...	...	...	...	200
				Males.	Females.	Total.
Number of patients in Medical Wards, Jan. 1st, 1897		...	90	...	54	144
,, ,, admitted during the year 1897		...	1125	...	778	1903
Total		...	1215		832	2047
,, ,, in Medical Wards, Dec. 31st, 1897		...	78	...	61	139
,, ,, treated to a termination during 1897		...	1137	...	771	1908
,, ,, discharged or died during 1897:						
		Males.	Females.	Total.	Rate per cent.	
Cured	...	462	332	794	41·61	
Relieved	...	282	234	516	27·04	
Unrelieved or other causes	...	167	79	246	12·89	
Died	...	226	126	352	18·46	
Total		1137	771	1908		
Average number of days of each patient's stay in hospital—26·66.						

¹ This does not include 21 beds in Adelaide Ward, the statistics of which are given in the Report of the In-patient Department for the Diseases of Women.

TABLE III.—*General*

DISEASE.	Number of cases.			Age.							Duration of residence.									
	Total.	M.	F.	Under 5	5-10	-20	-30	-40	-50	-60	Above 60	Under 1 week.	Wks. 1-2	Wks. 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Above 1 year.
I. GENERAL DISEASES.																				
Measles	10	7	3	6	2	...	2	...	...	...	...	3	3	4	...	...	...	...	...	...
Scarlet fever	10	4	6	1	1	1	7	...	...	...	...	1	1	2	6	...	...	...	...	...
Influenza	15	7	8	...	...	2	10	1	2	...	...	7	2	3	3	...	...	...	...	...
Enteric fever	52	30	22	1	4	15	22	6	4	...	...	2	5	3	24	18	...	...	...	...
Erysipelas	5	2	3	...	1	1	...	1	1	1	...	1	1	3	...	...	...	...	...	...
Diphtheria	89	44	45	65	19	1	3	1	...	...	...	32	4	19	27	7	...	...	...	...
Diphtheritic paralysis	12	9	3	5	4	...	2	...	1	...	...	3	...	3	3	3	...	...	...	...
Fever of doubtful nature	18	10	8	4	2	7	4	1	...	...	...	9	3	3	2	1	...	...	...	...
Whooping-cough	3	1	2	2	1	...	...	...	...	...	...	2	1	...	...	...	...	...	...	...
Ague	5	5	...	...	...	4	1	...	...	...	...	2	1	1	1	...	...	...	...	...
Pyæmia	1	...	1	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...
Syphilis	2	2	...	...	...	...	1	...	...	1	...	...	...	...	2	...	...	...	...	...
Septicæmia	1	...	1	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...
Acute rheumatism	82	58	24	...	4	29	24	16	6	3	...	5	17	43	14	3	...	...	...	...
Chronic articular rheumatism	4	3	1	...	...	1	...	1	2	...	...	...	2	2	...	...	...	...	...	...
Muscular rheumatism	4	3	1	...	...	...	3	1	...	...	...	2	...	2	...	...	...	...	...	...

Table of Diseases.

Cured.		Re-lieved.		Unre-lieved.		Died.		REMARKS.
M.	F.	M.	F.	M.	F.	M.	F.	
4	2	...	...	...	...	3	1	2 cases, 1 house physician and 1 nurse, originated in hospital. For other cases originating in hospital see Table V, and also "Diphtheria," "Tuberculous meningitis," and "Various cerebral." Of cases discharged: tracheotomy in 1. Of fatal cases: 1 death in Casualty. Tracheotomy in remaining 3, of which 2 also had diphtheria. Broncho-pneumonia in 2.
1	6	...	...	2	...	1	...	5 cases, including 4 nurses and 1 wardmaid, originated in hospital. For other cases originating in hospital see Table V, and also "Diphtheria," "Empyema," and "Various surgical." Of cases discharged: rheumatism in 1. The cases unrelieved were transferred to Fever Hospital. In fatal case a general hæmorrhagic rash.
7	8	...	...	...	...	...	...	Broncho-pneumonia in 1, jaundice in 1.
4	19	...	...	...	...	6	3	See Special Abstract. For two other cases see "Diabetes insipidus" and "Appendicitis."
2	3	...	...	...	...	...	...
3	25	...	...	...	...	18	20	See Special Abstract. For two other cases see "Measles." For cases originating in hospital see Table V, "Diarrhœa and vomiting" and "Various cerebral."
7	3	...	...	...	...	2	...	One student included in cases discharged. No P.M. on fatal cases.
0	7	...	...	...	1	...	...	Includes 2 house physicians. Enteric fever suspected in 2. Delusions of poisoning in 1 female. Transient albuminuria in 1. In 1, fever of intermittent type treated by methylene blue.
1	...	...	...	1	1	...	...	Broncho-pneumonia in 1, lobar pneumonia in 1. Cases unrelieved discharged to prevent spread of infection in hospital.
...	4	...	...	1	...	...	...	All contracted abroad.
...	...	...	...	...	...	...	1	Joints involved. Source of infection not found.
...	...	...	...	...	...	...	...	Abdominal gumma in 1; tertiary ulcers in 1. For other cases see "Cerebral syphilis," and "Syphilis of liver."
...	...	...	...	...	...	...	1	Acute peritonitis, decomposing patch of placenta in uterus.
24	1	...	...	...	...	...	...	37 were cases of first attack, and in 12 of these there was evidence of mitral disease. Pleurisy occurred in 1, purpuric eruption in 1, and tonsillitis in 1. 19 were cases of second attack, and in 12 of these there was evidence of mitral disease, in 1 of aortic disease, and in 1 of mitral and aortic disease. Of the cases with mitral disease, in 1 there was acute pericarditis and bilateral pleural effusion, and in 1 evidence of adherent pericardium. Of the 26 cases of third or later attack, mitral disease was present in 11, mitral and aortic disease in 6. Delirium tremens in 1.
...	2	1	...	...	...	...	...	In 1 male, mitral incompetence. In the female, æt. 14, the affection was polyarticular; marked muscular atrophy of hand muscles; scattered fibrous nodules; she had also chorea and mitral disease (chronic rheumatic arthritis).
...	2	1	...	...	...	...	...

TABLE III—

DISEASE.	Number of cases.			Age.								Duration of residence.									
	Total.	M.	F.	Under 5	5-10	-20	-30	-40	-50	-60	Above 60	Under 1 week.	Wks. 1-2	Wks. 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Above 1 year.	
II. DISEASES OF THE SKIN— <i>continued.</i>																					
Favus	1	1	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...
Seborrhœa	1	...	1	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
Psoriasis	1	...	1	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...
Sclerodermia	1	...	1	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...
III. DISEASES OF THE RESPI- RATORY SYSTEM.																					
Simple laryngitis	8	5	3	4	...	2	...	...	1	1	...	3	3	1	1	...	...	...	...	...	...
Tuberculous laryngitis	1	1	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...
Syphilitic laryngitis	2	1	1	...	...	...	1	1	...	...	...	...	...	1	1	...	...	...	...	...	...
Acute bronchitis	15	9	6	7	1	1	3	1	1	1	...	7	3	4	1	...	...	...	...	...	...
Chronic bronchitis	23	12	11	...	...	2	...	6	4	8	3	4	2	14	3	...	...	...	...	...	...
Broncho-pneumonia	26	7	19	21	5	...	...	...	...	...	...	4	11	8	3	...	...	...	...	...	...
Acute pneumonia	84	60	24	11	21	22	10	11	5	3	1	10	24	39	10	1	...	...	...	...	...

continued.

Cured.		Re-lieved.		Unre-lieved.		Died.		REMARKS.
M.	F.	M.	F.	M.	F.	M.	F.	
1	...	...	...	...	...	...	...
...	...	...	1	...	...	...	...
...	...	...	1	...	...	...	...
...	...	...	1	...	...	...	...
4	3	1	...	...	...	...	...	4 cases in young children with laryngeal stridor. Tracheotomy in 1.
...	...	1	...	...	...	...	...	For other cases see "Phthisis."
...	...	1	1	...	...	...	...	In the male, stenosis necessitating tracheotomy.
9	5	...	...	...	...	...	1	Of cases discharged: pleuritic friction in 1, transient albuminuria in 1. In fatal case extensive collapse of right lung.
...	...	11	10	...	...	1	1	Of cases discharged: 1 male admitted also in 1896; 1 female admitted twice. Albuminuria in 6, mitral disease in 1, œdema of legs in 4. Of fatal cases: in 1 (female, a readmission) emphysema, ascites, and congested viscera; in other emphysema, obliteration of both pleural cavities, and cirrhosis of liver.
4	17	...	...	...	...	3	2	Of cases discharged: ophthalmia in 1, diarrhœa in 1, rickets in 1. Of fatal cases: in 4 ordinary signs of broncho-pneumonia. No P.M. on 1, admitted with large ulcerated surface over sternum due to poulticing.
4	20	...	1	...	...	6	3	Situation: right lung 33, left 41, both 9, undetermined 1. Of cases on right: in 15 upper, in 10 lower, in 2 middle and lower, and in 6 all three lobes were involved. Of cases on left: in 2 upper, in 34 lower, and in 4 both lobes were involved. In 1 undetermined. Of cases on both sides: in 7 both lower lobes were involved, in 1 right upper and left lower, in 1 left lower and all lobes of right lung were involved. Crisis on 5th day in 8, on 6th in 10, on 7th in 5, on 8th in 12, on 9th in 2, on 10th in 5, on 11th, 12th, and 14th in each 1. In remaining cases, either lysis occurred, or resolution was delayed, or there was a fatal termination (9 cases), or patient was admitted at end of attack. Of cases cured: in 1, a male case, the spleen had been removed for traumatic rupture in 1896, otitis media in 1, acute nephritis in 1, empyema in 1. Delayed resolution in 1. Pleural effusion in 2, in one of which also pericarditis and rheumatism. Thrombosis in legs in 1. Diarrhœa in 1. The case relieved was discharged with residual signs at left base. Of fatal cases: double empyema and purulent pericarditis in 1, pericarditis and ichthyosis in 1, acute nephritis in 2, extensive fibrinous pleurisy in 3. In 1 no P.M.

TABLE III—

DISEASE.	Number of cases.			Age.									Duration of residence.									
	Total.	M.	F.	Under 5	5-10	20	30	40	50	60	Above 60	Under 1 week.	Wks. 1-2	Wks. 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts 9-12	Above 1 year.		
III. DISEASES OF RESPIRATORY SYSTEM— <i>continued.</i>																						
Phthisis	70	47	23	7	5	9	20	15	11	3	...	9	19	23	17	2	...	...	...	...	...
Malignant disease of lung	1	1	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...
Cirrhosis of lung . . .	2	2	...	...	...	...	...	...	...	...	2	...	...	2	...	...	...	...	...	...	...
Hæmoptysis	3	3	...	...	...	...	3	...	...	...	...	1	1	1	...	...	...	...	...	...	...
Bronchiectasis	4	2	2	...	...	3	...	...	...	1	...	...	...	1	...	1	2	...	...	...	...
Emphysema	2	2	...	...	...	...	...	...	1	...	1	...	...	2	...	...	...	...	...	...	...
Pleurisy	35	29	6	1	5	9	6	4	7	3	...	...	5	17	11	2	...	...	...	...	...
Empyema	28	22	6	8	5	7	3	1	1	1	2	...	2	2	18	6	...	...	...	...	...
Mediastinal growth . .	1	1	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...
IV. DISEASES OF THE CIRCULATORY SYSTEM.																						
Pericarditis	9	4	5	...	1	4	...	1	2	...	1	...	1	1	5	2	...	...	...	...	...

continued.

Cured.		Re-lieved.		Unre-lieved.		Died.		REMARKS.
M.	F.	M.	F.	M.	F.	M.	F.	
...	...	24	14	11	6	11	4	Of cases discharged: bronchitis in 3, albuminuria in 2, enlarged liver in 2, tuberculous laryngitis in 7, tuberculous peritonitis in 2, tuberculous glands of neck in 1, hæmoptysis in 9, caries of spine in 1. Of fatal cases: in 14 both lungs involved, cavities at both apices in 7, at one apex in 3, laryngeal ulceration in 3, nephritis in 2, endocarditis in 2, tuberculous ulceration of ileum in 4, of ileum and colon with tuberculous peritonitis in 1, tuberculous peritonitis in one other, tuberculous arthritis in 1, fibroid phthisis of right apex in 1, hæmoptysis in 3. Diphtheria preceded death in 1. In 1 no P.M.
...	...	...	...	1	...	...	...	Also an in-patient in 1896.
...	...	...	...	2	...	...	...	Same case; left upper lobe affected.
...	...	...	...	2	...	1	...	Case admitted three times; hæmoptysis on each occasion. Resection of rib performed. P.M.—A localised gangrenous cavity at apex of right lower lobe, two inches in diameter; two smaller cavities. For other cases see "Phthisis."
...	...	1	2	1	...	...	...	Resection of rib in one case.
...	...	1	...	...	...	1	...	In fatal case, infarcts in lower lobes. For other cases see "Bronchitis."
24	4	4	1	...	1	1	...	Right-sided 13, left-sided 21, bilateral 1. Aspiration: once 18 times, twice 5 times. Dry tapping twice. Mania in 1, cerebral hæmorrhage in 1, gout in 1; one case had been previously admitted for phthisis. The fatal case was a readmission; the pleura was thickened and caseous; a few miliary tubercles in lungs; scattered tubercles in peritoneum and liver.
17	5	2	1	...	...	3	...	Right-sided 9, left-sided 18, bilateral 1. Resection of rib in 25, aspiration and incision in 1, sinuses enlarged in 1, intra-tracheal injections in 1 in which the empyema had burst into the lung. Of cases discharged: phthisis in 2, scarlet fever in 1. Of fatal cases: operation in all, the empyema communicated with the main bronchus in 1, red hepatisation of right upper lobe in 1, phthisis with tuberculous ulceration of intestine in 1.
...	...	...	...	...	...	1	...	All mediastinal glands the seat of new growth, probably sarcomatous; right hydrothorax.
2	3	2	2	...	...	...	...	Rheumatism in 7. One case admitted twice, and a third time for "Mitral stenosis and incompetence;" mitral disease in 5, aortic disease in 1, and in this case albuminuria, enlarged liver, and delusions of persecution. Pleurisy in 2. For another case see under "Aortic and mitral disease."

TABLE III—

DISEASE.	Number of cases.			Age.								Duration of residence.								
	Total.	M.	F.	Under 5	5-10	-20	-30	-40	-50	-60	Above 60	Under 1 week.	Wks. 1-2	Wks. 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Above 1 year.
IV. DISEASES OF THE CIRCULATORY SYSTEM — <i>continued.</i>																				
Adherent pericardium .	4	3	1	...	2	2	...	...	...	...	...	...	1	1	1	1	...	...	...	...
Valvular disease of heart—																				
(a) Mitral stenosis .	8	2	6	...	...	...	...	3	5	...	...	...	...	5	2	1	...	...	...	...
(b) Mitral incompetence .	31	20	11	...	2	7	3	6	7	6	...	6	2	13	6	4	...	...	...	...
(c) Mitral stenosis and in- competence	36	10	26	...	1	10	14	5	5	1	...	2	4	11	12	6	1	...	...	...
(d) Aortic disease .	15	9	6	...	...	...	3	5	2	4	1	...	4	7	2	2	...	...	...	...

continued.

Cured.		Re-lieved.		Unre-lieved.		Died.		REMARKS.
M.	F.	M.	F.	M.	F.	M.	F.	
...	...	1	...	...	...	2	1	The case relieved fatal on readmission. Complete obliteration of pericardium in all, mitral incompetence in all, with old aortic disease in 1, vegetations on aortic and mitral valves in 1, passive congestion of viscera in all, much ascites in 1. For other cases see "Acute rheumatism," "Mitral incompetence," "Mitral stenosis and incompetence," "Mitral and aortic disease," "Ulcerative endocarditis," "Chronic nephritis," and "Hydrochloric acid poisoning."
...	...	2	6	...	...	...	...	History of rheumatic fever in 4. Ascites in 2, in one of which also hydrothorax. Albuminuria in 2. Hæmoptysis in 1. Abdominal tumour in 1.
...	...	15	9	2	1	3	1	History of rheumatism in 15, of rheumatism and chorea in 2. Of cases discharged: 1 fatal on readmission, 1 an in-patient in 1895. Pleurisy in 2, albuminuria in 7, bronchitis in 3, ascites in 6, œdema in 6, emphysema in 1, aphasia and hemianopia in 1, exocardial murmur in 1, adherent pericardium in 1. Of fatal cases: adherent pericardium in 2, recent mitral endocarditis in 1; tricuspid incompetence with a patch of softening in right corpus striatum and pulmonary infarcts in 1, passive congestion of viscera in 2.
...	...	8	23	...	...	2	3	History of rheumatism in 16, of chorea in 8, of rheumatism and chorea in 2. Of cases discharged: 3 had been in-patients in previous years. During the year one patient was admitted 4 times, and four were admitted twice, one dying on readmission. One patient was also admitted twice for pericarditis. One died on third admission. Adherent pericardium in 1, bronchitis in 2, epistaxis in 1, hydrothorax in 5, albuminuria in 13, œdema in 6, ascites in 5, acute rheumatism in 1, pregnancy in 1, history of cerebral embolism in 3. Of fatal cases: obstruction and incompetence of mitral valve in all, with extreme stenosis in 1, adherent pericardium in 1, pulmonary infarction in 1, hydrothorax in 2. Chronic tubal nephritis in 1. No P.M. in 1.
...	...	6	4	...	2	3	...	History of rheumatism in 3, of syphilis in 3, of alcohol in 2; in one probably due to rupture of valve during strain. Of cases discharged: ascites in 1, œdema in 4, albuminuria in 6, pregnancy in 1. Of fatal cases: stenosis and incompetence in 2, dilated aortic arch in 1, pulmonary infarction in 2, hydrothorax in 1, passive congestion of viscera in all.

continued.

Cured.		Re- lieved.		Unre- lieved.		Died.		REMARKS.
M.	F.	M.	F.	M.	F.	M.	F.	
...	...	15	1	1	1	9	3	History of rheumatism in 14, of rheumatism and chorea in 2. Three had been in-patients in previous years. One patient admitted three times and two admitted twice during the year. Of cases discharged: tricuspid incompetence in 3, albuminuria in 7, œdema in 6, ascites in 2, hydrothorax in 2, hæmaturia in 1, chorea in 1, profuse epistaxis in 1. Of fatal cases: mitral and aortic incompetence in 5, in two of which also recent endocarditis of both valves, and in one of the two adherent pericardium in addition; in 2 others there was much aortic atheroma. Mitral stenosis existed in 7 cases, associated in 2 with sclerosis of aortic valve simply, in 1 with sclerosis of aortic valve and tricuspid stenosis, in 1 with aortic sclerosis and recent mitral and aortic endocarditis, in 1 with chronic and recent endocarditis of both aortic and pulmonary valves, in 1 with recent endocarditis of aortic and tricuspid valves, and in 1 with aortic sclerosis and adherent pericardium and pleuræ. Hydrothorax was present in 5 cases, ascites in 3, passive congestion of viscera in 12, acute pericarditis in 1, infarctions in 2, surgical kidney in 1. For other cases see "Acute rheumatism," "Cirrhosis of liver," and "Acute nephritis."
...	1	...	...	4	6	The patient relieved died on readmission. Of the 10 fatal cases: evidence of old standing valvular disease in 9. The main site of the lesion was the mitral valve in 1, the aortic in 3, the aortic and mitral in 2, the mitral valve and auricular wall in 2, the aortic, mitral, and tricuspid valves in 1, and the auricular wall only in 1. Adherent pericardium in 2, infarcts of spleen in 3, of kidneys in 3, of lung in 1. Meningeal hæmorrhage in 1, cerebral hæmorrhage in 1. Pneumonia in 1. Granular kidneys in 1, uterine placental polyp in 1, double hydrothorax in 1. For another case see "Gall-stones."
...	1	2	...	1	In fatal case: stenosis of infundibulum of pulmonary artery, patent undefended space, recent tricuspid endocarditis, pulmonary tuberculosis, left pyo-pneumothorax, gall-stones.
...	...	2	...	...	...	4	1	Of cases relieved: cardiac dilatation in 1, arrhythmia and palpitation in 1. Of fatal cases: cardiac hypertrophy and dilatation in all, pulmonary infarction in 3, aortic atheroma in 1, hydrothorax in 1, cardiac viscera in 4.
...	1	...	Advanced general arterio-sclerosis, heart hypertrophied, aortic valves calcareous, double hydrothorax.

TABLE III—

DISEASE.	Number of cases.			Age.								Duration of residence.									
	Total.	M.	F.	Under 5	5-10	-20	-30	-40	-50	-60	Above 60	Under 1 week.	Wks. 1-2	Wks. 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Above 1 year.	
IV. DISEASES OF THE CIRCULATORY SYSTEM— <i>continued.</i>																					
Thoracic aneurysm	13	12	1	...	...	...	...	4	4	1	4	6	...	1	3	1	1	1	...	...
Raynaud's disease	6	4	2	...	2	...	2	2	...	...	...	1	1	2	2	...	...	...	...	...
Venous thrombosis	1	...	1	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...
V. DISEASES OF THE DUCTLESS GLANDS.																					
Exophthalmic goitre	9	1	8	...	...	1	7	...	1	...	...	1	...	2	4	2	...	...	...	...
Addison's disease	2	2	...	...	...	...	...	2	...	...	...	...	...	2	...	...	...	...	...	...
VI. DISEASES OF THE DIGESTIVE ORGANS.																					
1. <i>Alimentary canal.</i>																					
Glossitis	1	1	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...
Tonsillitis	27	8	19	...	1	5	20	1	...	...	...	16	9	2	...	...	...	...	...	...
Stricture of œsophagus	22	22	...	...	...	...	...	3	11	8	...	5	5	8	3	1	...	...	...	...

continued.

Cured.		Re- lieved.		Unre- lieved.		Died.		REMARKS.
M.	F.	M.	F.	M.	F.	M.	F.	
...	...	2	...	3	1	7	...	History of syphilis in 6. Situation: ascending arch 5, transverse arch 3, ascending and transverse arch 1, junction of ascending and transverse arch 1, and in this case also a second small aneurysm immediately above aortic valve; descending arch 2, in one of which there were two aneurysms of the descending arch, and in the other there was also a second small cured aneurysm springing from the concavity of the transverse arch. In 1, position undetermined. Of fatal cases: 1 had been an in-patient on previous occasions; left lung compressed and infarcted in 1, right lung compressed 1; trachea ulcerated, left bronchus compressed, and left lung bronchiectatic in 1. Erosion and perforation of sternum and ribs in 1. Erosion of 6th to 9th dorsal vertebrae with softening of nerve roots in 1, double hydrothorax in 1, cirrhosis of liver in 1, chronic interstitial nephritis in 1. See also Special Abstracts.
...	...	4	1	...	...	...	1	Of cases discharged: hæmoglobinuria in 4 (one an in-patient in 1896 and 1895). The 5th case fatal on readmission with general tuberculosis.
...	1	...	...	...	...	Right leg affected.
...	...	1	6	...	1	...	1	Of cases discharged: in male marked improvement under thyroid treatment, persistent slight fever in 1, albuminuria in 1. In fatal case: thymus enlarged, thyroid enlarged and cystic, consolidation of bases of lower lobes of both lungs.
...	1	...	1	...	In case discharged: no pigmentation, but probably Addison's disease. In fatal case: tuberculosis of both supra-renals, of liver and lungs; gall-stones; pigmentation around umbilicus.
1	A house physician.
8	19	...	...	...	...	...	...	Includes 1 house surgeon, 1 senior obstetric house surgeon, 2 students, 9 nurses, and 4 wardmaids. Tonsillar abscess in 4.
...	...	7	...	10	...	5	...	Of cases discharged: probable malignant disease in 13, result of corrosive poisoning in 1, gastrostomy in 2. Of fatal cases: carcinoma in all. Situation: in upper third in 2, in lower third in 1, near cardiac orifice in 1, opposite root of lung in 1. Much dilatation of œsophagus in 1, communication with trachea and septic broncho-pneumonia in 1, phthisis in 1, chronic nephritis and gout in 1, secondary nodules in liver, ascites, and ulcer of duodenum in 1.

TABLE III—

DISEASE.	Number of cases.			Age.								Duration of residence.									
	Total.	M.	F.	Under 5	5-10	-20	-30	-40	-50	-60	Above 60	Under 1 week.	Wks. 1-2	Wks. 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Above 1 year.	
VI. DISEASES OF THE DIGESTIVE ORGANS— <i>continued.</i>																					
1. <i>Alimentary canal</i> —cont.																					
Dysphagia	2	2	...	...	...	...	1	...	1	...	...	...	...	1	...	1	...	...	...	...	...
Dyspepsia	20	9	11	...	...	3	7	3	5	2	...	5	6	7	2	...	...	...	...	...	...
Gastric ulcer	38	6	32	...	3	18	11	6	...	...	...	3	4	15	14	2	...	...	...	...	...
Hæmatemesis	1	1	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...
Vomiting	4	2	2	...	...	1	1	...	...	1	1	...	2	1	1	...	...	...	...	...	...
Malignant disease of stomach (carcinoma)	7	2	5	...	...	...	...	...	5	1	1	1	...	3	1	1	1	...	...	...	...
Dilated stomach	3	3	...	...	...	...	...	...	...	3	...	...	...	...	2	1	...	...	...	...	...
Duodenal ulcer	3	3	...	...	...	...	...	1	2	...	...	1	1	1	...	...	...	...	...	...	...
Stricture of pylorus (simple)	1	1	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...
Gastric pain	6	1	5	...	...	3	2	1	...	...	...	2	1	1	2	...	...	...	...	...	...
Diarrhœa and vomiting	32	14	18	7	5	4	11	4	1	...	...	18	9	3	1	1	...	...	...	...	...
Diarrhœa	22	14	8	11	...	3	5	...	1	1	1	12	6	3	...	1	...	...	...	...	...
Dysentery	1	1	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...
Colic	4	4	...	...	1	1	...	1	1	...	...	2	2	...	...	...	...	...	...	...	...
Constipation	22	6	16	3	1	3	5	4	3	1	2	6	9	5	1	1	...	...	...	...	...
Intussusception	10	4	6	10	...	...	...	...	...	...	...	6	1	1	2	...	...	...	...	...	...

continued.

Cured.		Re-lieved.		Unre-lieved.		Died.		REMARKS.
M.	F.	M.	F.	M.	F.	M.	F.	
...	...	1	...	1	...	...	...	In one probable neurosis, in the other bougies met with no resistance.
3	6	3	5	3	...	...	...	Of cases discharged: hæmatemesis or history of it in 28, melæna in 1, perforation with local abscess in 1, parotitis in 1, albuminuria in 1, mitral incompetence in 1. Three cases had been in-patients in previous years. In fatal case: perforated ulcer in middle of lesser curvature, a second ulcer in anterior wall, intense peritonitis.
4	18	1	13	...	1	1	...	
...	...	1	...	...	...	...	...	Melæna also, probable carcinoma of stomach. For other cases see "Gastric ulcer."
1	...	1	...	1	1	...	...	Of cases discharged: 1 became resistive and demented. Of fatal cases: 1 pyloric growth with secondary infection of peritoneum and liver; in 1, large growth near pylorus nearly encircling stomach and with infection of omentum and peritoneum; in 1, posterior wall affected, and with malignant disease also of ovaries, mesentery, and retro-peritoneal glands, also peritonitis from perforation of an ulcer in ascending colon.
...	...	...	...	1	3	1	2	
...	...	3	...	...	...	...	...	Probable pyloric obstruction in 2, cause undetermined in 1.
...	...	2	...	...	...	1	...	Case relieved admitted twice, also an in-patient in 1896. For fatal case see Special Abstracts.
...	...	...	...	...	...	1	...	Followed hydrochloric acid poisoning. Stricture had been relieved by operation. P.M.—Ulceration of œsophagus, retro-œsophageal abscess and left empyema. See "Poisoning," and also Special Abstracts.
1	3	...	2	...	...	...	...	Moveable kidney in 1.
9	16	2	...	...	...	3	2	Includes 1 student, 8 nurses, and 1 wardmaid. Of cases discharged: diphtheria occurred in 4, purpuric eruption on legs in 1. Of fatal cases: all in infants; 4 in summer; in 1 suppression of urine and œdema of legs, kidneys normal.
6	6	2	...	...	...	6	2	All the fatal cases in infants.
4	...	...	...	1	...	...	...	Contracted abroad.
5	9	1	6	...	1	...	...	Cystitis in 1, whooping-cough in 1. One due to peritonitis following labour in 1896; admitted subsequently for tuberculous peritonitis (which see).
...	5	...	...	...	...	4	1	Of cases discharged: 1 was admitted three times; the intussusception had been reduced just before admission on the first occasion; it recurred and was cured by operation on readmission (ileo-cæcal type); admitted for the third time with doubtful recurrence. Of other 2 cases, 1 explored and reduced (ileo-cæcal), in 1 diagnosis probable. Of fatal cases: ileo-cæcal in all; 4 were explored, 2 reduced, 2 irreducible.

TABLE III—

DISEASE.	Number of cases.			Age.								Duration of residence.									
	Total.	M.	F.	Under 5	5-10	-20	-30	-40	-50	-60	Above 60	Under 1 week.	Wks. 1-2	Wks. 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Above 1 year.	
VI. DISEASES OF THE DIGESTIVE ORGANS—continued.																					
1. <i>Alimentary canal</i> —cont.																					
Band strangulation	2	...	2	...	...	...	...	1	...	1	...	2	...	...	...	...	...	...	...	...	...
Volvulus	2	2	...	...	...	...	...	...	1	...	1	2	...	...	...	...	...	...	...	...	...
Obstruction, other forms	6	4	2	1	...	1	...	3	1	...	...	3	...	1	1	1	...	...	...	...	...
Malignant disease of intestine	14	7	7	...	...	...	...	3	2	2	7	5	1	2	4	2	...	...	...	...	...
Inflammation of vermiform appendix	80	64	16	...	1	33	33	6	4	2	1	15	15	22	24	4	...	...	...	...	...
Ulcerative colitis	3	2	1	...	...	1	...	1	...	...	1	1	...	...	1	1	...	...	...	...	...
Hæmorrhage from bowel	1	...	1	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...
Probable disease of pancreas	1	...	1	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...
Enteroptosis	1	...	1	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...
2. <i>Peritoneum.</i>																					
Tuberculous peritonitis	21	13	8	7	7	2	4	...	...	1	...	2	3	4	7	3	2	...	...	...	...

continued.

Cured.		Re-lieved.		Unre-lieved.		Died.		REMARKS.
M.	F.	M.	F.	M.	F.	M.	F.	
						2		Small intestine strangulated in each; exploration in each; pregnancy in 1, band in connection with hæmatosalpinx in 1, with uterine fibroids in other.
						2		See Special Abstracts.
2						2	2	Of cases discharged: in 1 nature doubtful, relieved by enemata, in 1 lateral anastomosis for peritoneal adhesions. Of fatal cases: exploration in all; in 1 tuberculous peritonitis and the obstruction due to adhesion of a caseating gland to lower part of ileum, in 1 due to pelvic adhesions, in 2 the cause of obstruction not obvious, but associated with acute peritonitis in 1 and ulcers of ileum in 1.
		3	3	1	1	3	3	Situation: rectum 4, sigmoid 5, descending colon 1, splenic flexure 2 (same case readmitted), hepatic flexure 1, in 1 of colon, but exact position undetermined. Of cases discharged: 1 admitted twice and transferred to Surgical side, where lateral anastomosis and death. Six were explored, including 5 colotomies. Of fatal cases: exploration in 4, including 3 colotomies. In 1 the hepatic flexure, liver, and gall-bladder were involved. Perforation of cæcum and peritonitis in 1.
52	13	1		1		10	3	First attack in 58, and of these 9 fatal, second attack in 10, recurrent attacks in 7, not ascertained in 6, and of these 4 fatal. Exploration in 25, and in 7 others after transfer to Surgical side. Of cases discharged: in one female onset of enteric fever 22 days after admission to hospital. Of fatal cases: exploration in 12, general peritonitis in 10, subdiaphragmatic abscess in 2, pelvic abscess and phthisis in 1. Also see Special Abstracts.
		1	2					
	1							
		1						Fatty stools; no jaundice.
		1						
22		8	2	2	2	1	4	Of cases discharged: exploration in 4, one of which had undergone laparotomy in 1896 for peritonitis, and had been admitted twice in 1897 for constipation; exploration showed diffused tubercle of peritoneum, ovaries, and Fallopian tubes; subsequently admitted and died on Surgical side. 1 case transferred to Surgical side for operation. Of fatal cases: ulceration of bowel in all, with intestinal obstruction from matting in 1, tuberculosis of Fallopian tubes in 1, numerous strictures of bowel from cicatrization in 1, perforation and peritonitis in 1, pulmonary tuberculosis in 3.

TABLE III—

DISEASE.	Number of cases.			Age.								Duration of residence.								
	Total.	M.	F.	Under 5	5-10	20	30	40	50	60	Above 60	Under 1 week.	Wks. 1-2	Wks. 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Above 1 year.
VI. DISEASES OF THE DIGESTIVE ORGANS—continued.																				
2. Peritoneum—cont.																				
Chronic peritonitis . . .	2	1	1	...	...	1	...	1	...	...	...	1	...	...	1	...	...	...	...	...
3. Liver.																				
Cirrhosis	46	20	26	...	...	4	2	9	6	13	12	8	9	16	13	...	...	...	...	...
Gall-stones	7	5	2	...	...	...	...	1	2	3	1	...	2	3	...	2	...	...	...	...
Catarrhal jaundice . . .	2	1	1	...	...	...	2	...	...	...	...	...	2	...	...	...	...	...	...	...
Obstructive jaundice . .	4	4	...	...	...	...	...	1	1	...	2	...	1	...	1	2	...	...	...	...
Abscess of liver	4	4	...	...	...	...	1	3	...	...	...	...	...	...	3	1	...	...	...	...
Syphilis of liver	2	2	...	...	...	2	...	...	...	...	...	...	...	...	2	...	...	...	...	...
Hydatids of liver	2	...	2	...	...	...	...	1	1	...	...	...	1	...	1	...	...	...	...	...
Tumour of liver	4	3	1	...	...	...	1	...	2	...	1	...	...	3	1	...	...	...	...	...
Malignant disease of gall-bladder	1	1	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...
Enlarged liver	1	1	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...
4. Various.																				
Abdominal aneurysm . . .	1	1	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...
Malignant disease of pancreas	1	...	1	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...

continued.

Cured.		Re- lieved.		Unre- lieved.		Died.		REMARKS.
M.	F.	M.	F.	M.	F.	M.	F.	
...	...	...	1	...	...	1	...	Intestines adherent in fatal case. Cause indeterminate in both.
...	...	16	20	2	1	2	5	Of cases discharged: ascites in 34, of whom 24 were tapped and 1 incised. One case admitted 6 times, one 5, one 3, and one twice in course of year. Albuminuria in 6, œdema in 5, hydrothorax in 2, hæmatemesis in 3, enlarged spleen in 1, mitral disease in 2, mitral and aortic in 1, epistaxis in 1, bronchitis in 5, delusions and hallucinations in 1. Of fatal cases: liver hobnailed in 4, in one of which (admitted for the third time) also adenomatous outgrowths (see Special Abstracts), general tuberculosis in 1, phthisis in 1, ascites in 6, hydrothorax and pulmonary infarction in 1, delirium tremens in 1, chronic nephritis in 1.
5	1	...	...	...	...	...	1	Colic in 6, jaundice in 2, exploration and removal of stones in 3, one of whom died with abscess round gall-bladder and fistula between gall-bladder and duodenum.
1	1	...	...	...	...	...	...	Exploration in case relieved; cause of obstruction undetermined; permanent cutaneous fistula resulted; in case unrelieved, tumour apparently connected with liver. In fatal case: gall-bladder distended with viscid black fluid and common duct dilated; cause indeterminate.
1	...	1	...	1	...	1	...	
2	...	...	...	...	...	2	...	One case explored and cured, readmitted for return of pain and diarrhœa. Of fatal cases: in 1 a pin in appendix, multiple abscesses of liver, subphrenic abscess and localised empyema. See Special Abstracts. In 1 ulceration of colon, two hepatic abscesses, and perinephritic suppuration.
...	...	...	1	...	...	1	...	Same case; gummata of liver.
...	1	...	...	...	...	...	1	Case discharged, probably obsolete hydatid. In fatal case: exploration, suppurating hydatid in left lobe, mitral stenosis and ulcerative endocarditis, pulmonary infarctions and abscesses, cerebral embolism.
...	2	1	1	...	...	...	...	Malignant disease in 2 (one explored), in 2 nature doubtful.
...	...	...	...	...	1	...	...	Carcinoma of gall-bladder and deposits in liver; also cirrhosis, jaundice, and ascites.
...	1	...	...	...	...	...	...	Nature doubtful.
...	...	...	1	...	...	...	...	Transferred to Surgical side.
...	...	...	...	1	...	...	...	Explored.

TABLE III—

DISEASE.	Number of cases.			Age.								Duration of residence.									
	Total.	M.	F.	Under 5	5-10	-20	-30	-40	-50	-60	Above 60	Under 1 week.	Wks. 1-2	Wks. 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Above 1 year.	
VI. DISEASES OF THE DIGESTIVE ORGANS— <i>continued.</i>																					
4. <i>Various</i> — <i>continued.</i>																					
Abdominal tumour . . .	23	17	6	...	1	...	3	6	2	6	5	2	5	8	6	2	...	...	...	...	...
Ascites	2	1	1	...	...	1	1	...	...	...	...	...	1	...	...	1	...	...	...	...	...
VII. DISEASES OF THE GENITO-URINARY SYSTEM.																					
Acute nephritis. . . .	20	14	6	1	2	4	4	7	2	...	...	2	3	3	8	4	...	...	...	...	...
Chronic nephritis . . .	83	61	22	...	1	7	18	17	17	13	10	13	13	25	22	8	2	...	...	...	...
Tuberculous kidney . . .	5	4	1	...	...	...	3	2	...	...	...	..	...	1	3	1	...	...	...	...	...
Malignant disease of kidney	6	3	3	2	...	1	...	...	1	2	...	2	...	3	1	...	...	...	...	...	...
Cystic kidney	3	2	1	...	...	...	...	1	...	1	1	1	1	...	...	1	...	...	...	...	...
Pyelitis	2	...	2	...	...	...	2	...	...	...	...	...	1	1	...	...	...	...	...	...	...
Hydronephrosis	4	...	4	...	1	3	...	...	...	...	...	...	...	1	1	2	...	...	...	...	...
Enlarged kidney	1	...	1	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...
Moveable kidney	5	2	3	...	...	...	1	4	...	...	...	...	...	4	1	...	...	...	...	...	...
Renal colic	6	6	...	1	...	...	3	1	1	...	...	...	1	5	...	...	...	...	...	...	...
Hæmaturia	2	1	1	...	...	1	1	...	...	...	...	...	...	1	1	...	...	...	...	...	...

continued.

Cured.		Re- lieved.		Unre- lieved.		Died.		REMARKS.
M.	F.	M.	F.	M.	F.	M.	F.	
1	...	1	2	13	3	2	1	Of cases discharged: pancreatic cyst in 1, explored and cured; probable malignant disease in 15, one of which, a readmission, explored, and found to be sarcoma; enlarged abdominal glands in 2; simple tumour in 2. Of fatal cases: exploration in 1, sarcoma in connection with left kidney; in 1 diffuse carcinoma of ovary, stomach, and upper abdomen; in 2 no P.M.
...	...	...	1	1	...	...	...	Jaundice and œdema of legs in 1; cause undetermined in both.
5	3	7	1	...	1	2	1	Of cases discharged: aortic and mitral disease in 1, uræmic convulsions in 1, pleural effusion in 1. Of fatal cases: cirrhosis of liver and cerebral softening in 1, uræmic convulsions in 1, pleural effusion and ascites in 1, cardiac hypertrophy in 2.
...	...	37	14	4	1	20	7	History of scarlet fever in 1, pregnancy in 1, plumbism in 3, gout in 6, alcohol in 11. Of cases discharged: enlarged heart in 13, œdema in 25, marked ascites in 6, renal retinitis in 11, uræmic convulsions in 3, renal amaurosis in 1, uræmic vomiting in 1, pregnancy in 1 (labour induced), purpura in 2, hæmatemesis in 1, bronchitis in 2, cirrhosis of liver in 1. Of fatal cases: kidneys granular and of normal size or under in 12, granular and large in 3, smooth and large in 5, atrophy of one kidney with hypertrophy and mixed nephritis in other in 1, fatty change alone in 1, no naked eye change in 1. No P.M. in 4. Cardiac hypertrophy in 17, dilatation in 1, pericarditis in 1, adherent pericardium in 1, adherent pleuræ in 2, pulmonary infarction in 6, phthisis in 1, hydrothorax in 5, bronchitis in 2, peritonitis in 1, enteritis in 1, simple ulceration of stomach and œsophagus in 1, nutmeg liver in 3.
...	...	2	...	1	1	1	...	Of cases discharged: phthisis in 1. In fatal case no P.M.
...	1	...	...	2	1	1	1	In case cured: a spindle-celled sarcoma round upper end of left kidney (possibly supra-renal in origin) was removed. Of cases unrelieved: in 1 exploration. Of fatal cases: extirpation attempted in 1, uræmia in 1.
...	...	...	...	...	1	2	...	Of fatal cases: in each both kidneys affected, and in 1 the liver slightly; in both uræmia.
...	...	2	...	...	...	...	...	Same case; also an in-patient in 1896.
...	3	...	1	...	...	...	...	Of cases cured: in 2 calculus impacted in ureter removed by operation, with rapid subsidence of hydronephrosis. (See Special Abstracts.) Sac drained in case relieved.
...	...	...	...	...	1	...	...	Nature undetermined.
...	...	2	1	...	2	...	...	One case transferred to Surgical side for nephropexy.
...	...	4	...	2	...	...	...	Cases unrelieved transferred to Surgical side, and in 1 nephro-lithotomy.
...	1	1	...	...	...	...	...	Bilharziosis in male; cause undetermined in female.

TABLE III—

DISEASE.	Number of cases.			Age.								Duration of residence.								
	Total.	M.	F.	Under 5	5-10	-20	-30	-40	-50	-60	Above 60	Under 1 week.	Wks. 1-2	Wks. 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Above 1 year.
VII. DISEASES OF THE GENITO-URINARY SYSTEM — <i>continued.</i>																				
Albuminuria	1	1	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...
Edema <i>sine</i> albuminuria .	1	1	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...
VIII. DISEASES OF THE NERVOUS SYSTEM.																				
Acute meningitis . . .	3	3	...	2	...	1	...	...	...	...	...	2	...	1	...	...	...	...	...	...
Chronic meningitis . . .	2	2	...	2	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...
Tuberculous meningitis .	17	10	7	8	4	3	2	...	...	...	...	12	3	1	1	...	...	...	...	...
Hemiplegia	13	10	3	...	...	2	2	1	4	3	1	1	5	3	4	...	...	...	...	...
Cerebral hæmorrhage . .	8	6	2	...	...	...	...	...	2	3	3	7	...	1	...	...	...	...	...	...
Intra-cranial (cerebral) tumour	10	8	2	...	1	1	2	4	2	...	...	3	...	1	4	1	1	...	...	...
Headache	2	...	2	...	...	...	1	...	1	...	...	...	1	1	...	...	...	...	...	...
Paralysis agitans . . .	2	2	...	...	...	...	...	...	1	1	...	...	1	...	1	...	...	...	...	...
Tetany	2	1	1	2	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...
Nystagmus	1	1	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...
Hydrocephalus	3	2	1	2	1	...	...	...	...	...	...	...	1	1	1	...	...	...	...	...
Cerebral syphilis . . .	9	4	5	...	...	...	...	6	2	1	...	...	...	2	5	2	...	...	...	...

continued.

Cured.		Re- lieved.		Unre- lieved.		Died.		REMARKS.
M.	F.	M.	F.	M.	F.	M.	F.	
...	...	1	...	...	...	...	...	Albumen present only after meals: a student.
1	...	...	...	...	...	...	...	General anasarca, short apical systolic murmur. Similar attack 4 years previously.
...	...	...	...	...	...	3	...	In 1 cerebro-spinal in distribution, in 1 distribution basal and cortical, in 1 basal and cerebellar; cause undetermined in all.
...	...	...	...	...	...	2	...	In 1 chronic posterior basic meningitis (see Special Abstracts); in 1 disease of both mastoids and exploration, chronic basal meningitis, no tubercles in brain, but a few elsewhere.
...	...	...	...	1	...	9	7	Of fatal cases: general tuberculosis in 7, caseous bronchial glands in 2, chronic pulmonary or pleural tuberculosis in 5, caseous mesenteric glands in 1, caseous retro-peritoneal glands in 1, tubercular ulceration of ileum in 1, caseous tubercles on spleen in 1, caseous masses in brain in 2, double pyosalpinx in 1. No obvious chronic tuberculosis in 2; in 2 head only examined. In 1 no P.M.
1	2	5	...	3	1	1	...	Right-sided in 4, with aphasia in 3; left-sided in 9. History of syphilis in 3; infantile hemiplegia in 2. In fatal case: softening of central portion of left hemisphere, fibroid change in wall of left ventricle, congenital absence of right kidney.
...	...	1	...	...	...	5	2	In case relieved: hæmorrhage into left hemisphere with partial aphasia. Of fatal cases: in 1 right-sided hæmorrhage bursting into ventricles, and a second small hæmorrhage into left internal capsule; in 4 left-sided hæmorrhage, in one of which bursting into ventricles, and in this case also an old blood cyst of cerebellum; in 1 hæmorrhage into pons and ventricles; in 1 no P.M. Chronic interstitial nephritis in 2, fatty heart in 1, cirrhosis of liver in 1. For another case see "Pleurisy."
...	...	6	...	1	2	1	...	Of cases discharged: probable gumma in 2. Of fatal cases: in 1 caseating right lobe of cerebellum and hydrocephalus, in 1 sarcoma of left occipital lobe, in 1 glioma of both optic thalami.
...	1	...	...	1	...	...	...
...	...	...	...	2	...	...	...
1	...	...	...	...	...	1	...	The patient cured contracted diphtheria in hospital and subsequently measles. In fatal case: subpleural and subpericardial hæmorrhages.
...	...	...	...	1	...	...	...	Astigmatism.
...	...	...	...	1	2	...	...
...	1	4	3	...	...	1	...	Of cases discharged: in 4 paralysis of various cranial nerves. The fatal case was a 3rd admission. P.M.—Chronic basal meningitis, with numerous white fibrous nodules along vessels, gummatous periostitis of frontal bone, scars of gummata in liver. For other cases see "Hemiplegia" and "Cerebral tumour."

TABLE III—

DISEASE.	Number of cases.			Age.								Duration of residence.								
	Total.	M.	F.	Under 5	5-10	-20	-30	-40	-50	-60	Above 60	Under 1 week	Wks. 1-2	Wks. 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Above 1 year.
VIII. DISEASES OF THE NERVOUS SYSTEM—continued.																				
Brachial monoplegia	1	...	1	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...
Optic neuritis	1	...	1	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...
General paralysis of the insane	2	2	...	...	...	...	...	1	1	...	...	...	...	1	1	...	...	...	...	...
Idiocy	4	1	3	4	...	...	...	...	...	...	...	1	3	...	...	...	...	...	...	...
Agoraphobia	1	1	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...
Delusional insanity	2	2	...	...	...	...	...	1	...	1	...	1	...	1	...	...	...	...	...	...
Obscure mental cases	2	1	1	...	...	...	2	...	...	...	...	2	...	...	...	...	...	...	...	...
Melancholia	1	...	1	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...
Chorea	26	8	18	...	7	16	2	1	...	...	...	...	1	8	12	5	...	...	...	...
Hysteria	47	14	33	...	...	7	20	13	4	1	2	9	6	13	11	6	2	...	...	...
Epilepsy	16	13	3	...	3	2	5	2	2	...	2	9	2	3	2	...	...	...	...	...
Infantile convulsions	4	3	1	3	1	...	...	...	...	...	...	4	...	...	...	...	...	...	...	...
Paraplegia	12	7	5	...	...	3	3	6	...	...	...	...	...	2	6	3	...	...	1	...
Congenital spastic paraplegia	2	2	...	...	1	1	...	...	...	...	...	...	1	...	1	...	...	...	...	...
Locomotor ataxia	6	5	1	...	...	...	...	3	2	1	...	2	1	2	1	...	...	...	...	...
Disseminated sclerosis	11	5	6	...	...	...	1	8	1	1	...	...	1	5	4	1	...	...	...	...
Friedreich's ataxia	3	3	...	...	...	...	3	...	...	...	...	...	...	...	1	1	1	...	...	...
Ataxic paraplegia	1	1	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...
Bulbar paralysis	1	1	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...
Progressive muscular atrophy	4	3	1	...	...	2	1	...	1	...	...	...	1	2	1	...	...	...	...	...
Myelitis	7	7	...	...	...	1	1	1	1	2	1	...	...	3	1	...	1	2	...	...
Cervical pachymeningitis	1	...	1	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...
Spinal hæmorrhage	2	2	...	...	...	...	1	...	...	1	...	...	...	1	...	1	...	...	...	...
Diver's paralysis	1	1	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...

continued.

Cured.		Re-lieved.		Unre-lieved.		Died.		REMARKS.
M.	F.	M.	F.	M.	F.	M.	F.	
...	1	...	...	Left side; cause undetermined.
...	1	...	...	...	...	Cause undetermined.
...	2	...	...	...	No history of syphilis obtainable.
...	1	3	...	...	Microcephalus in 1, epilepsy in 2.
...	1	...	...	...
...	2	...	...	...	Delusions of persecution and attempted drowning in 1.
...	1	1	...	...
...	1	...	...	...	Following confinement 3 months previously; suicidal tendencies.
8	12	...	6	...	...	...	...	First attack in 16, second in 4, third or later attack in 6. Rheumatism in 7, family history of it in 7 more, family history of chorea in 1 more. Pregnancy in 3, in 2 of which rheumatism or family history of rheumatism. Attributed to fright in 1. Mitral disease in 15, aortic in 1.
6	13	4	14	4	6	...	...	Hystero-epilepsy in 1, neurasthenia in 13 (in 1 traumatic), paraplegia in 4, hypochondriasis in 1, convulsions in 2, choreiform movements in 5, hemiplegia in 3 with hemianæsthesia in 1, aphonia in 3, dyspnœa in 1, pseudo-asthmatic attacks in 1, dysphagia in 1, various pains in 4, depression in 1, vomiting in 2, migraine in 2, vertigo in 1, lethargy in 1, bronchitis in 1.
...	...	10	2	2	1	1	...	Of cases discharged: in 1 petit mal, in 1 optic neuritis. In fatal case: status epilepticus and exploration of brain. P.M.—No gross lesion.
3	1	...	...	...	...	...	...
...	...	1	3	6	2	...	...	History of syphilis in 1, probable spinal caries in 4, attributed to injury in 2.
...	2	...	...	...	Torticollis in 1.
...	5	1	...	...	Painless Pott's fracture with much callus in 1.
...	2	5	4	...	...	Right-sided weakness in 1, left-sided choreiform movements and right-sided optic atrophy in 1.
...	3	...	...	...	Two brothers, one admitted twice. See Special Abstracts.
...	1	...	...	...
...	1	...	...	...
...	3	1	...	...	Peroneal type in 1, spastic condition of legs in 1, double equinovarus in 1, in female left hand only affected.
...	4	...	3	...	Of cases discharged: 1 fatal shortly after discharge. P.M.—A tumour arising from membranes in region of foramen magnum pressed on cervical cord. Of fatal cases: in 1 carcinoma of spinal periosteum pressing on mid-dorsal region, in 1 growth of spinal membranes pressed on mid-dorsal region; secondary deposits in both. In 1 no P.M.
...	1	...	...	...
...	...	1	...	1	...	...	...	In both cases due to injury. See Special Abstracts.
...	1	...	...	...

TABLE III—

DISEASE.	Number of cases.			Age.								Duration of residence.									
	Total.	M.	F.	Under 5	5-10	-20	-30	-40	-50	-60	Above 60	Under 1 week	Wks. 1-2	Wks. 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Above 1 year.	
VIII. DISEASES OF THE NERVOUS SYSTEM— <i>continued.</i>																					
Sciatica	5	5	...	...	...	...	...	1	4	...	...	...	2	2	1	...	...	...	...	...	...
Neuralgia	3	3	...	...	...	...	2	...	...	...	1	2	...	...	1	...	...	...	...	...	...
Paralysis of cranial nerves	1	1	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
Facial paralysis	2	1	1	...	...	...	1	1	...	...	...	...	1	1	...	...	...	...	...	...	...
Ulnar neuritis	2	2	...	...	...	...	...	...	2	...	...	1	...	1	...	...	...	...	...	...	...
Peripheral neuritis	1	1	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...
Erb's paralysis	1	...	1	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
Obscure cases	3	3	...	...	...	...	...	...	1	1	1	...	...	1	...	2	...	...	...	...	...
IX. POISONING.																					
Alcoholism—																					
(1) Acute poisoning	11	6	5	...	...	...	3	4	2	2	...	7	1	3	...	...	...	...	...	...	...
(2) Paralysis	8	4	4	...	...	...	2	4	2	...	...	2	...	2	1	3	...	...	...	...	...
Plumbism	17	14	3	...	...	...	9	8	...	...	...	3	11	2	...	...	1	...	...	...	...
Opium—																					
(1) Morphinomania	1	1	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...
(2) Acute poisoning	5	2	3	1	...	...	2	...	1	...	...	3	1	1	...	...	...	...	...	...	...
Chloral and opium	1	1	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...
Carbolic acid	4	2	2	1	...	...	...	3	...	...	...	3	...	1	...	...	...	...	...	...	...
Oxalic acid	1	1	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...
Hydrochloric acid	3	2	1	...	...	1	...	1	...	...	1	2	1	...	...	...	...	...	...	...	...
Paraffin	2	1	1	2	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...
Mercury	1	1	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...
Belladonna	1	1	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...
Phosphorus	1	...	1	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
Ammonia	2	1	1	1	...	...	1	...	...	...	...	1	1	...	...	...	...	...	...	...	...
White precipitate	1	...	1	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...
Turpentine	1	1	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...

TABLE III—

[illegible]

continued.

Cured.		Re- lieved.		Unre- lieved.		Died.		REMARKS.
M.	F.	M.	F.	M.	F.	M.	F.	
2	1	...	...	...	...	1	1	Of cases cured: in the female, temporo-sphenoidal abscess; operation, followed by facial paralysis. Of fatal cases: in male, abscess in temporo-sphenoidal lobe, not explored; in female, lateral sinus thrombosis and pyæmia, explored.
7	2	1	7	9	3	2	2	One male transferred to Fever Hospital for scarlet fever contracted in hospital; subdiaphragmatic abscess in 1; 7 cases transferred to Surgical side. Of fatal cases: caries of acetabulum in 1, caries of spine and psoas abscess in 1, carcinoma of breast and liver in 1, strangulated femoral hernia in 1.
2	1	3	1	1	...	...	...
9	4	...	...	...	...	...	...	Attempted suicide in at least 4.
1	...	...	...	...	...	...	...
11	7	5	7	7	3	7	4	Cases discharged include one case of pseudo-hypertrophic paralysis. Of fatal cases: all marasmus in infants.
...	...	...	1	...	...	...	...
...	1	...	...	...	...	...	...
...	...	...	1	...	...	...	...
...	...	...	...	...	1	...	...
...	...	...	1	...	...	...	...	Transferred to Surgical side for operation.
...	...	...	...	...	1	...	...
...	...	...	...	...	1	...	...	Transferred to Surgical side.
462	332	282	234	167	79	226	126	
{ 794 }		{ 516 }		{ 246 }		{ 352 }		
1908								

TABLE IV.—*Table of Mortality.*

DISEASE.	Total.		Age.										Mor- tality per cent.
	No. dis- charged.	No. died.	Under 2	2-5	10	20	30	40	50	60	70	Above 70	
1. GENERAL DISEASES.													
Measles	6	4	2	1	1								40
Scarlet fever	9	1		1									10
Enteric fever ¹ . . . . .													...
Diphtheria ¹ . . . . .													...
Diphtheritic paralysis	10	2		1	1								16·66
Pyæmia		1									1		...
Septicæmia		1						1					...
Rickets		1	1										...
Diabetes mellitus	6	1				1							14·28
Diabetes insipidus ²		1					1						...
Pernicious anæmia	2	1						1					33·33
Leucocythæmia	4	2				1					1		33·33
General tuberculosis	0	13	2	2	2	2	2	3					100
Tetanus		1								1			...
2. DISEASES OF THE RESPIRATORY SYSTEM.													
Acute bronchitis	14	1	1										6·66
Chronic bronchitis	21	2							1	1			9·13
Broncho-pneumonia	21	5	3	2									19·23
Acute pneumonia	75	9					4	3	2				10·71
Phthisis	55	15	3	1		2	3	5	1				21·42
Pleurisy	34	1							1				2·85
Empyema	25	3		1		1					1		10·71
Mediastinal growth		1					1						...
Emphysema	1	1							1				50
Gangrene of lung	2	1					1						33·33
3. DISEASES OF THE CIRCULATORY SYSTEM.													
Adherent pericardium	1	3			1	2							75
Mitral incompetence	27	4			1	1		1		1			12·9
Mitral obstruction and incom- petence	31	5				1	2	2					13·88
Aortic disease	12	3					1			2			20
Aortic and mitral disease	18	12			1	3		4	3	1			40
Ulcerative endocarditis	1	10				2	2	4	1	1			90·9
Thoracic aneurysm	6	7						2	3		1	1	53·84
Raynaud's disease	5	1			1								16·66
Congenital heart disease	3	1				1							25
Arterio-sclerosis		1									1		...
Dilated heart	1	5						1	2	2			83·33

¹ See Special Abstract.² See Special Abstract—"Enteric fever."

TABLE IV—*continued.*

DISEASE.	Total.		Age.										Mor- tality per cent.
	No. dis- charged.	No. died.	Under 2	2-5	-10	-20	-30	-40	-50	-60	-70	Above 70	
4. DISEASES OF THE DUCTLESS GLANDS.													
Exophthalmic goitre	8	1	...	...	...	...	1	...	...	...	...	...	11·11
Addison's disease	1	1	...	...	...	...	...	1	...	...	...	...	50
5. DISEASES OF THE DIGESTIVE ORGANS.													
Stricture of œsophagus	17	5	...	...	...	...	...	...	4	1	...	...	22·72
Gastric ulcer	37	1	...	...	...	1	...	...	...	...	...	...	2·63
Malignant disease of stomach	4	3	...	...	...	...	...	3	...	...	...	...	42·85
Diarrhœa and vomiting	27	5	4	1	...	...	...	...	...	...	...	...	15·62
Diarrhœa	14	8	8	...	...	...	...	...	...	...	...	...	36·36
Intussusception	5	5	5	...	...	...	...	...	...	...	...	...	50
Band strangulation . . . . .	...	2	...	...	...	...	1	...	1	...	...	...	100
Volvulus . . . . .	...	2	...	...	...	...	...	1	...	1	...	...	100
Obstruction, other forms	2	4	...	1	...	...	3	...	...	...	...	...	66·66
Malignant disease of intestine	8	6	...	...	...	...	2	...	1	2	1	...	42·85
Inflammation of vermiform ap- pendix	67	13	...	...	1	7	5	...	...	...	...	...	16·25
Duodenal ulcer	2	1	...	...	...	...	1	...	...	...	...	...	33·33
Stricture of pylorus . . . . .	...	1	...	...	1	...	...	...	...	...	...	...	...
Tuberculous peritonitis	16	5	1	...	...	3	...	...	1	...	...	...	23·8
Chronic peritonitis	1	1	...	...	...	...	1	...	...	...	...	...	50
Cirrhosis of liver	39	7	...	1	...	...	4	1	1	...	...	...	15·21
Obstructive jaundice	3	1	...	...	...	...	...	...	...	1	...	...	25
Gall-stones	6	1	...	...	...	...	...	...	...	1	...	...	14·28
Abscess of liver	2	2	...	...	...	1	...	1	...	...	...	...	50
Syphilitic disease of liver	1	1	...	...	1	...	...	...	...	...	...	...	50
Hydatid disease of liver	1	1	...	...	...	...	1	...	...	...	...	...	50
Malignant disease of gall-bladder . . . . .	...	1	...	...	...	...	...	1	...	...	...	...	...
Abdominal tumour	20	3	...	...	...	...	2	1	...	...	...	...	13
6. DISEASES OF THE GENITO- URINARY SYSTEM.													
Acute nephritis	17	3	...	...	...	...	2	1	...	...	...	...	15
Chronic nephritis	56	27	...	...	1	7	6	5	3	4	1	...	32·53
Tuberculous disease of kidneys	4	1	...	...	...	1	...	...	...	...	...	...	20
Malignant disease of kidney	4	2	1	...	...	...	...	...	1	...	...	...	33·33
Cystic disease of kidneys	1	2	...	...	...	...	...	...	1	1	...	...	66·66
7. DISEASES OF THE NERVOUS SYSTEM.													
Acute meningitis . . . . .	...	3	...	2	...	1	...	...	...	...	...	...	100
Chronic meningitis . . . . .	...	2	1	1	...	...	...	...	...	...	...	...	100
Tuberculous meningitis	1	16	1	7	3	3	2	...	...	...	...	...	94·11
Hemiplegia	12	1	...	...	...	...	...	1	...	...	...	...	7·69
Cerebral hæmorrhage	1	7	...	...	...	...	...	2	2	2	1	...	87·5
Cerebral tumour	7	3	...	1	1	1	...	...	...	...	...	...	30
Hydrocephalus	1	2	1	...	1	...	...	...	...	...	...	...	66·66
Cerebral syphilis	8	1	...	...	...	...	1	...	...	...	...	...	11·11
Tetany	1	1	1	...	...	...	...	...	...	...	...	...	50

TABLE V.—*Cases of Infectious Disease occurring in the Hospital.*

Initials.	Sex.	Age.	Disease for which admitted.	Disease originating in hospital.	Date of onset.	Duration of previous residence in hospital.	Result.	Remarks.
A. E. S.	M.	Years. + 20	—	Measles	Mar. 3	—	C. Mar. 13	House physician.
A. S.	M.	3	Tetany	"	Feb. 28	54 days	C. Mar. 14	Contracted in Luke, where he had been transferred for diphtheria contracted in Florence.
M. G.	F.	+ 20	—	"	Oct. 3	—	C. Oct. 20	Nurse.
E. B.	F.	5½	Diphtheria	"	Oct. 12	89 days	C. Nov. 8	Contracted in Luke.
H. D.	F.	3	"	"	Oct. 12	23 "	C. " 8	Ditto.
V. S.	F.	2	"	"	Oct. 22	54 "	C. " 20	Ditto.
E. O.	F.	2½	Tuberculous meningitis	"	Dec. 14	3 "	D. Dec. 27	Admitted to Victoria in incubation stage.
W. G.	M.	19	Pes planus	Scarlet fever	May 23	8 days	Tr. " 24	Contracted in George.
C. F.	M.	5	Empyema	"	Apr. 10	22 "	C. " 26	Contracted in Florence.
L. J.	F.	+ 20	—	"	Apr. 16	—	C. " 21	Dormitory maid.
N. S.	F.	7	Diphtheria	"	Mar. 31	33 days	C. " 21	Contracted in Luke.
S. L.	F.	26	—	"	Apr. 17	—	C. " 30	Nurse.
M. P.	F.	+ 20	—	"	Apr. 25	—	C. June 8	Ditto.
M. N.	F.	+ 20	—	"	May 19	—	C. " 27	Ditto.
— I.	F.	+ 20	—	"	Sept. 11	—	C. Oct. 9	Ditto.
S. P.	M.	5	Diphtheria	Varicella	Dec. 8	6 days	C. Dec. 16	In Victoria.
E. W.	F.	2	Purpura	"	Oct. 21	13 "	C. Nov. 7	In Luke.
E. W.	F.	28	Diabetes insipidus	Enteric fever	Dec. 4, '96	34 "	D. Jan. 1, '97	Contracted in Charity.
A. C.	F.	25	Appendicitis	"	Nov. 28, '96	22 "	C. Jan. 27	Ditto.
A. S.	M.	3	Tetany	Diphtheria	Jan. 19	14 "	C. Mar. 14	Contracted in Florence. See also above under Measles.
S. L.	M.	1½	Phthisis	"	Mar. 3	28 "	D. " 8	Contracted in Victoria.
P. H.	M.	1½	Diarrhoea and vomiting	"	Mar. 4	51 "	C. " 16	Ditto.

SPECIAL ANALYSES AND ABSTRACTS.

I. GENERAL DISEASES.

1. DIPHTHERIA.

The antitoxin treatment was continued during 1897, and the following tables are prepared and arranged in the same way as in last year's report. During the year 89 cases of diphtheria were admitted, and of these 84 were treated with antitoxic serum. Of the 5 cases not so treated 4 were brought to the hospital in a moribund condition, while 1 was the case of a student with a mild attack, followed, however, by paralysis.

In two of the above-mentioned 84 cases the serum of the British Institute of Preventive Medicine was used, while in the remaining 82 cases that prepared at the laboratories of the Royal Colleges of Physicians and Surgeons was used. All the following tables, unless stated otherwise, refer to these 82 cases.

Treatment was in each case commenced immediately after admission to hospital.

Fifty-two of the 89 cases were submitted to a bacteriological examination. The cases which recovered showed a pure culture of diphtheria bacilli in 15, a mixed culture in 3, and absence of diphtheria bacilli in 15 instances; some of these latter were, however, examined late in the course of the disease. The fatal cases yielded a pure culture in 11, a mixed culture in 5, and a negative result in 3 instances.

TABLE I.—Cases treated with antitoxin in 1897.

Ages.	Duration of disease.												Mortality per cent.		
	1 day.		2 days.		3 days.		4 days.		5 or more days.		Undetermined.			Total.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.		Cases.	Deaths.
Under 1 year	1	1	1	1	3	3	...	...	1	...	1	1	7	6	85·71
1—2 years	2	1	3	1	5	4	1	...	4	4	...	...	15	10	66·66
2—3 „	4	2	2	1	4	2	3	2	6	1	1	...	20	8	40
3—4 „	2	...	...	...	5	3	3	1	2	1	...	...	12	5	41·66
4—5 „	2	...	...	...	...	...	1	1	4	...	...	...	7	1	14·28
5—10 „	4	...	2	1	1	...	3	1	7	2	1	...	18	4	22·22
10—15 „	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...
15—20 „	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20 and upwards	...	...	1	...	...	...	...	...	...	...	1	...	2	...	...
Total . . .	16	4	9	4	18	12	11	5	24	8	4	1	82	34	...
Mortality per cent. . .	...	25	...	50	...	66·26	...	45·45	...	33·33	...	25	...	41·46	...

TABLE II.—*Mortality for different age periods during 1897.*

Age.	Cases.	Deaths.	Mortality per cent.
Under 5 years	61	30	49·18
„ 10 „	79	34	43·03
„ 15 „	80	34	42·5
All ages	82	34	41·46

Of these cases—

74·4 per cent. were patients under 5 years of age.
 21·95 „ „ between 5 and 10 years of age.
 1·22 „ „ between 10 and 15 years of age.
 2·44 „ „ over 15 years of age.

TABLE III.—*Laryngeal diphtheria and tracheotomies.*

Ages.	Laryngeal cases.			Tracheotomies.		
	Cases.	Deaths.	Mortality per cent.	Cases.	Deaths.	Mortality per cent.
Under 1 year	6	5	83·33	5	4	80
1—2 years	13	10	76·92	10	7	70
2—3 „	13	4	30·7	10	4	40
3—4 „	7	1	14·28	6	0	...
4—5 „	5	1	20	4	1	25
5—10 „	13	3	23·07	9	2	22·22
10—15 „	1	...	...	1	...	...
15 and upwards	1	1	...	...	...	...
Total . . .	59	25	42·37	45	18	40

The percentage of tracheotomies was 76·27.
 The larynx was in no case involved after admission.

TABLE IV.—*Complications arising during 1897.*

Ordinary complications.	No. of cases.	Percentage.
Albuminuria	20	24·4
Paralysis	10	12·2
Broncho-pneumonia	15	18·3
Lobar pneumonia	2	2·44
Hæmorrhagic rash	1	1·22
Suppurating cervical gland	1	1·22
Nephritis	3	3·66
Convulsions	1	1·22

In addition to the above, 1 case contracted scarlet fever, 1 chicken pox, and 2 measles. (See special table.)

Complications due to antitoxin.	No. of cases.	Percentage
Rash	15	18·3
Joint pains	1	1·22
Fever without rash	1	1·22

TABLE V.—*Amount of antitoxin used and dosage.*

	Amount given in units.	Number of patients.	Number of injections.	Average dose in units.	Average number of injections.	Average amount per case in units.
Fatal cases .	181,500	34	42	4321	1·23	5338
Recoveries .	209,500	48	53	3953	1·10	4364
All cases .	391,000	82	95	4115	1·15	4768

The average duration of life after admission in fatal cases during the year was 5·05 days.

2. ENTERIC FEVER.

During 1897 the number of cases of enteric fever treated to a termination was 54, and the deaths were 10, giving a mortality of 18·51 per cent. Included in these 54 cases are two in which the disease was contracted in the hospital, one admitted November 6th, 1896, for appendicitis, with onset of enteric fever 22 days later; and one with diabetes insipidus, admitted October 31st, 1896, with onset of enteric fever 34 days later, and death on January 1st, 1897. Included also in this series are 8 cases admitted during 1896, viz. October, 1; November, 4 (with one death in January, 1897); and December, 3.

The admissions in 1897 were distributed as follows: January, 4; February, 2 (1 death); March, 5 (2 deaths); April, 2; May, 0; June, 1; July, 3; August, 5; September, 8 (1 death); October, 15 (1 death, and 1 died in 1898); November, 7 (2 deaths); December, 3 (1 death).

Of these 55 admissions 11 remained in hospital in 1898, and with one exception resulted in recovery.

The average residence of each case (of the 52 admitted with enteric fever) was 49·25 days ; of those which terminated in recovery 56·27 days ; and of those which proved fatal, 15·33 days.

The details as to age and sex incidence are given in Table III of this report.

Of the deaths, 3 resulted from perforation of the bowel, occurring on the sixteenth, the thirty-fourth, and the sixty-ninth day of the disease ; the last case had been in the hospital for 63 days, with sustained high temperature. One died on the fifteenth day from toxæmia, with intense constitutional symptoms, and with innumerable subserous and submucous hæmorrhages. The remaining 6 died from exhaustion and cardiac failure, associated with hæmorrhage in 3 (in 1 case death occurring on the thirteenth, and in 2 on the nineteenth day of the disease) ; with broncho-pneumonia in 1, on the seventeenth day, with acute pneumonia in 1, on the nineteenth day, and uncomplicated in 1, on the twenty-third day.

Seventeen cases came under observation in the first week of the disease, 28 in the second, 8 in the third, and 1 later.

The onset in 9 cases was acute.

A profuse eruption was present in 11, a scanty eruption in 30 cases. In the rest the eruption was not noticed. A macular and petechial eruption appeared in 1.

Splenic enlargement was detected in 42 cases, absent in 9, not mentioned in 3.

In 23 cases the tongue was described as typical. Diarrhœa was present in 12 cases, constipation in 32 ; in 2 cases constipation was followed by diarrhœa. Vomiting occurred during the course of the disease in 6 cases.

In 6 cases hæmorrhage from the bowel was observed, the earliest instance being on the thirteenth and the latest on the twenty-eighth day of the disease. Epistaxis was noticed in 2 cases and bleeding gums in 1.

Bronchitis was more or less severe in 15 cases. Broncho-pneumonia occurred in 2, lobular pneumonia in 2, and collapse of lung in 1.

Transient albuminuria was present in 14 cases ; albumen was also found in the urine of 4 of the fatal cases. Retention of urine occurred in 2 cases.

Periostitis of tibia occurred once, and of femur once.

Suppurative otitis media occurred once.

Abdominal pain was present in 13 cases.

Headache was a prominent symptom in 17 cases ; delirium was present in 13, with marked muscular tremors in 3 ; transitory mania occurred in 1.

The temperature exceeded 104° F. in 24 cases. The duration of fever whilst under observation varied from 3 to 63 days, the average duration being 18·2 days and the average maximum temperature 104° F.

Single rigor occurred during the progress of the disease in 2 instances—on the fourteenth and twenty-ninth days. Femoral thrombosis occurred in 2 cases.

True relapse occurred in 7 cases. The days of the relapse, when it could

be ascertained, were twenty-seventh, thirty-fourth, thirty-ninth, forty-second, fifty-first, and once in the thirteenth week. The duration of the relapse varied from 6 to 28 days, the average being 17·8 days. The duration of the apyrexial interval varied from 8 to 11 days, the average being 9·5. The maximum temperature during relapse varied from $102\cdot4^{\circ}$ to 105° , the average maximum being $103\cdot8^{\circ}$. In one case the hæmorrhage occurred on the fifteenth day of the relapse.

One case occurred in a nurse who had been nursing an enteric fever case outside the hospital.

Of the fatal cases, in 1 there was no P.M. examination; in all the others the typical ulceration of the small intestine was found, and in 4 the colon also was ulcerated.

3. LEUCOCYTHÆMIA.

1. P. T—, female, æt. 11, admitted July 30th, discharged August 18th, 1897. Family history good. The patient herself in early childhood had whooping-cough, measles, and mumps; at six years of age she had an illness lasting six weeks, described as brain fever. For several winters she had been subject to cough. Twelve months before admission she began to suffer from languor and weakness, and had to be taken away from school on that account. Enlargement of the abdomen was noticed seven months before admission, and she complained of pain in the left side. On several occasions she coughed up clots of dark blood; she was not infrequently sick, and shortly before admission was troubled with diarrhœa of offensive type.

On admission she was pale and well nourished. The abdomen was prominent, and the spleen was found to be enormously enlarged, reaching two inches to the right of the middle line and to within $1\frac{1}{2}$ inches of Poupart's ligament; the surface of the spleen was smooth, and no tenderness was experienced on palpation. There was a general enlargement of all the superficial lymphatic glands; they were hard and freely moveable. The heart was enlarged, the apex-beat being three quarters of an inch outside the nipple line, and the first sound was followed by a systolic murmur which was well heard in the axilla. There was nothing abnormal in the lungs. Urine sp. gr. 1020, normal.

Enumerations of the blood were taken on many occasions, the number of leucocytes varying from half a million to 700,000, and of red cells about two and a quarter millions to the cubic millimetre. The proportion of white to red cells varied from 1 : 3·3 to 1 : 4·6.

During her residence in the hospital there was usually an evening rise of temperature of about a degree. She was treated with liquor arsenicalis in 3 and 5 minim doses for twelve days, and then left the hospital. On readmission thirteen days later the blood count was as follows: leucocytes 440,000, red cells 3,210,000 per c.mm. She was at once put on the arsenic again in 6 minim doses three times a day, and this was gradually increased to 12 minims. She was also given Blaud's pills. Under treatment the number of leucocytes steadily diminished until on her discharge on October

30th the condition of blood was: leucocytes 20,000, red cells 4,025,000 per c.mm., or a proportion of 1:101·25.

2. *Acute leucocythæmia; death*.—A. D—, male, æt. 60, admitted September 9th, died September 12th, 1897. Family history good. Eighteen years ago he had three ribs fractured, and three years before his left side was crushed by a van. He had always been a strong and healthy man; never had syphilis; not a heavy drinker. His illness began three months before admission, with loss of appetite and general weakness; he also complained of aching pain in the abdomen. Cramps in legs appeared six weeks, and cutaneous hæmorrhages four weeks before admission. The petechiæ first appeared on ankles and legs, gradually spreading upwards until they involved all parts of his body. His nose and gums began to bleed only a few days before he came to the hospital. He also vomited blood. Latterly he had become extremely weak and short of breath.

On admission he was pale and cachectic looking, and there was marked pallor of the mucous membranes. The gums were red, swollen, and spongy. Petechial hæmorrhages were scattered over the whole of the body, especially on anterior aspects of legs and thighs; they were purple in colour and varied in size up to a split pea. On the legs there were a few larger masses of effused blood, forming tumours as large as a split walnut. There were two or three small hæmorrhages into the left iris, none into the retina. There was no abdominal tenderness; the edge of spleen could just be felt on deep inspiration. The heart's apex-beat was situated in the fifth intercostal space in the nipple line; no murmurs audible. Urine normal. There was no enlargement of superficial glands. Examination of the blood showed 1,560,000 red corpuscles and 360,000 leucocytes per cubic millimetre. The great majority of the white cells were lymphocytes, many being of the large variety; a few poikilocytes were present.

Patient died on September 12th; temperature above normal all the time, maximum 101·2°.

Post-mortem.—The body though thin was not emaciated. The superficial fat was normal in appearance. The left ventricle was dilated and somewhat hypertrophied; there were innumerable subpericardial hæmorrhages. The clots in the cardiac cavities were abundant and of a curious violet plum colour, and this appearance was generally prevalent throughout the blood. The spleen was slightly enlarged and very soft. The liver was large, anæmic, and fatty looking. It gave a good blue reaction with potassium ferrocyanide and hydrochloric acid. The marrow in the centre of the shaft of the long bones was of a chocolate-brown colour.

II. DISEASES OF THE CIRCULATORY SYSTEM.

AORTIC ANEURYSM; EROSION OF VERTEBRÆ;
LAMINECTOMY; DEATH.

W. B—, æt. 35, seaman, admitted September 14th, died October 24th, 1897. Family history unimportant. He contracted syphilis seventeen years before admission. His health was excellent until two years before admission, when he first noticed pain in the middle of his back; the pain, which was of an aching character, occurred three or four times a week, generally at night. He attended Poplar Hospital as an out-patient. The frequency of the attacks increased gradually, and for the four months preceding his admission to hospital it had become continuous, and was also associated with pain in the lower part of the chest and in the epigastrium; the pain varied in intensity at different times. For two years also he had experienced some difficulty in bending his back. Four months before admission he was three weeks in Sidney Hospital without relief. During this four months he had lost two stones in weight, his appetite was bad, and he slept badly.

On admission he was a powerfully-built man. Nothing abnormal was detected in the heart or lungs; urine normal. A triangular area of hyperæsthesia was found on the right side of the chest, having the following boundaries: above, the lower margin of the seventh rib and its costal cartilage; below, the costal margin; internally, the right sternal edge, the apex being situated in the anterior axillary line. As regards the spine: extension and lateral movements were very limited; the fifth to eighth dorsal vertebræ were prominent, and there was a depression almost three inches long below this prominence. Tenderness was elicited on pressure over this area of the spine. He was first treated on the supposition that the pain was of a functional character, and subsequently with iodide and mercurial inunction, but with no relief. Early in October he developed a band of anæsthesia round the lower part of the left chest, whilst on the right side a narrower band of hyperæsthesia was present; both areas corresponded to the seventh and eighth dorsal nerves. On one occasion transient difficulty in swallowing was complained of. On October 23rd he complained of abdominal pain and became paraplegic, with loss of power in legs and blunting of sensation in the legs and abdomen. On October 24th he was operated on with a view to the relief of pressure; the laminæ were removed from the fifth to eighth dorsal vertebræ. The vertebræ were found to be eroded, and there had been considerable hæmorrhage into the membranes; death occurred on the same day. The appearances at the operation were suggestive of malignant growth.

Post-mortem.—The heart was of normal size and altogether free from disease. An aneurysm about the size of a small chestnut, filled with laminated clot, sprang from the concave aspect of the aortic arch. A second aneurysm arose from the lowest part of the thoracic aorta, forming a tumour $4\frac{1}{2}$ by 5 inches. The orifice of communication between the

aneurysm and the aorta measured $\frac{3}{4}$ by $1\frac{3}{4}$ inches. The sac was filled with clot, mostly of recent origin. The upper border of the aneurysm corresponded to the fifth dorsal vertebra, and its lower to the tenth. The body of the seventh vertebra had practically disappeared, and even the seventh intervertebral disc was destroyed. The destruction of the eighth was considerable, and the sixth and ninth were both eroded. The ribs on the left side from the sixth to the eleventh, and on the right from the sixth to the tenth, were affected, the heads of the seventh and eighth and an inch or more of their bodies being destroyed, and in the others considerable erosion had taken place. The spinal cord was softened at the level of the seventh vertebra, and the seventh nerve-roots were swollen and pink.

III. DISEASES OF THE DIGESTIVE SYSTEM.

1. DUODENAL ULCER; PERFORATION; SUBDIAPHRAGMATIC ABSCESS; DEATH.

J. S—, male, æt. 37, admitted November 12th, died November 18th, 1897. His illness commenced suddenly on the night preceding admission to hospital, with severe abdominal pain, without any preceding indigestion or any other symptoms.

On admission he was a strong, robust man, in a profuse perspiration. The abdomen was acutely tender, at first in the umbilical region, subsequently more to the left side; the abdominal wall was very rigid, especially in the lower half. The liver dulness was obliterated in front and as far out as the mid-axillary line, in which latter position it extended from the seventh rib to the costal margin. Temperature 100° ; pulse 130.

By November 15th there was definite resistance in the epigastrium, with impaired resonance and muscular rigidity. By this time also dulness was present at the base of the right lung from the angle of the scapula downwards, with faint breath-sounds and diminished vocal fremitus and resonance.

On November 15th an incision about three inches long was made to the right of the mid-line, and a large quantity of foul pus was evacuated from an abscess between the diaphragm and the right lobe of the liver. A counter-incision was made in the right iliac region. Little or no improvement followed the operation; a negative result was met with on attempting aspiration of the right pleura, and he died three days after the operation. Temperature rose as high as 106.4° on the day before death.

Post-mortem.—There was acute peritonitis, limited to the right upper quadrant of the abdomen. The liver projected three inches below the ribs, and its right lobe was coated on its upper surface with a layer of thick yellowish pus. The uncovered part of the left lobe was covered to a less degree with more recent exudate. There was a small perforation in the anterior surface of the first part of the duodenum; this was visible without

disturbing the parts in the least. On the anterior aspect of the great omentum a small quantity of pus was present. In the right iliac region the intestines were slightly adherent. The lungs were congested and œdematous, and the light lower lobe was adherent to the diaphragm; there was no empyema. At the right apex there was evidence of old tubercular disease. The duodenal ulcer was old, smooth-edged, and as large as a threepenny piece.

2. TWO CASES OF VOLVULUS OF SMALL INTESTINE; EXPLORATION; DEATH.

1.—W. S—, male, æt. 42, admitted August 24th, died August 25th, 1897. Four days before admission he was seized with abdominal pain; this gradually increased in severity until it became agonising in character. Two days later vomiting commenced, and was frequently repeated. Bowels were constipated from the onset of the pain; previously they had been quite regular.

On admission there was no pronounced distension of the abdomen; it was tender on palpation, especially on the left side; no tumour could be felt. On percussion dulness was obtained all over the left side of the abdomen, but it did not shift with any alteration of position. Shifting dulness was obtained in the right flank.

Operation.—On opening the peritoneal cavity there was a large escape of blood-tinged serum; the upper part of the small intestine was much distended, deep blue in colour, and its serous surface had lost polish. The large intestine was normal. The patient was extremely collapsed, and died shortly after the operation.

Post-mortem.—The body was extremely fat. The upper twenty inches of the jejunum was much distended and of a deep maroon, in fact almost black, colour. The bowel wall was remarkably thickened, and the corresponding mesentery infiltrated and of a similar colour to the bowel. On section there seemed to be a diffuse hæmorrhagic condition. At the upper extremity of the diseased segment there was a distinct sulcus of a slightly paler colour than the rest; at the lower end, however, there was a rapid shading off to the normal rather than a sharp line of demarcation. Internally the mucosa had the same tint as the serosa, and the lumen was full of fluid blood. There seemed no doubt that the lesion had been a twisting of the upper part of the jejunum on itself, and that the volvulus had been reduced by the surgical manipulations.

2.—C. J—, labourer, æt. 34, admitted July 24th, died July 24th, 1897. For several months he had suffered from constipation, and for two or three days from complete obstruction and abdominal pain.

On admission he was very collapsed and there was evident peritonitis. The abdomen was explored and septic peritonitis found. Death occurred shortly after admission.

Post-mortem.—The abdomen was much distended, and contained a considerable quantity of blood-stained fluid. The small intestines generally

were distended and of a dark red colour. On investigation there was found to be a volvulus of a large portion of the small intestine, some five feet being involved. This portion was completely rotated round the base of its mesentery, and was firmly fixed in its new position, so that it was with difficulty disentangled. The corresponding portion of its mesentery was deeply congested and swollen.

3. APPENDICITIS; SUBDIAPHRAGMATIC ABSCESS; DEATH.

C. F. S—, male, æt. 8 years, admitted September 17th, died September 19th, 1897. Father said to have had an abscess in right side with similar symptoms, some years previously.

A fortnight before admission there was a sudden onset of pain, localised to the right side of the abdomen, with vomiting and constipation. The constipation lasted a week, and was succeeded by diarrhœa.

Two days before admission a needle was inserted through one of the lowest intercostal spaces and fourteen ounces of offensive pus withdrawn.

On admission there was a definite mass in the right iliac fossa, and from this a hard band could be traced upwards towards the costal margin. The edge of the liver could be felt two inches below the costal margin. In the thorax the upper limit of dulness commenced at the level of the fourth rib in the right nipple line, and posteriorly at the level of the angle of the scapula. Breath-sounds, vocal fremitus, and resonance were diminished over the dull area. Temperature 101.2° .

On the following day a trocar passed through the seventh intercostal space discovered pus. A portion of rib was resected, and the pleura was found to be unaffected. In order to give an opportunity for the formation of adhesions so as to shut off the pleura from the collection of pus below the diaphragm, a plug was inserted and further operation postponed. The next evening, however, the boy was seized with sudden dyspnœa and restlessness, and died within an hour's time.

Post-mortem.—On opening the abdominal cavity the edge of the liver was found to be adherent to the adjacent intestinal coils and to the abdominal wall; on breaking down the adhesions a large abscess cavity was exposed, the floor of which was formed by the right lobe of the liver and the roof by the dome of the diaphragm; the cavity contained some rather offensive yellow pus. The coils of intestine in the neighbourhood of the cæcum were also adherent to one another; the appendix was found behind the cæcum, and pointing upwards and slightly outwards. It was two and a half inches long, and its terminal quarter of an inch was almost separated by ulceration. On the proximal side of the ulcer was a fæcal concretion half an inch in length. From the appendix a suppurating track ascended on the outer side of the colon, and was the source of the subdiaphragmatic suppuration. The diaphragm was perforated in one spot with the formation of a small cavity containing pus. The right lung was much compressed, the lower lobe being completely collapsed. There was no evidence whatever of the pus having invaded the lungs or bronchial system.

IV. DISEASES OF THE LIVER.

1. CIRRHOSIS OF LIVER IN A BOY (? ADENOMATOUS CIRRHOSIS) ; SUPPURATIVE PERITONITIS ; DEATH.

A. L—, æt. 11, schoolboy, admitted April 22nd, died October 22nd, 1897. Family history unimportant.

In July, 1896, he had an attack of enteric fever, and was described as having been rather dull ever since. For about a week preceding admission to hospital he was troubled with sickness and diarrhœa. Two months previously he had been admitted to Albert Ward for an injury to hip. No history of alcohol.

On admission he was very drowsy ; tongue slightly coated. The liver was slightly enlarged, and its surface harder than normal. The spleen could be felt one inch below the costal margin. There was a suppurating sinus on outer side of right thigh. He remained in hospital seven weeks, and ascites developed gradually. A small incision was made with a view to exploring the abdomen, and about four pints of ascitic fluid withdrawn ; there was no evidence of tuberculous peritonitis.

He again came under observation in July, and remained in hospital for five weeks. Fluid had reaccumulated in the abdomen, and at times he had noticed his legs to be swollen. There was considerable distension of the abdomen, with a well-marked fluid thrill ; the edge of the liver could be felt about three inches below the costal margin ; the spleen also could still be felt. There was no albuminuria. There were a few enlarged veins coursing over the abdomen. He was treated with mercury and iodide, and on discharge all evidence of ascites had disappeared.

He was readmitted for the last time on October 20th, and died on October 22nd, 1897.

He had been very well until October 9th, when he was seized with vomiting and diarrhœa ; five days later he complained of severe abdominal pain. On admission he looked very, ill with dry brown tongue and sores on lips ; the abdomen was distended with fluid and the skin œdematous ; he had severe diarrhœa and died two days later.

Post-mortem.—There was general suppurative peritonitis, with five pints of yellow turbid exudation. The liver, which was very small, was quite concealed under the ribs. Its surface was hobnailed, and a hemispherical tumour projected from the middle of its upper surface ; the tumour was as large as a golf ball and dull yellow in colour. Two smaller tumours were found. On section the liver showed numerous bright yellow islets surrounded by fibrous tissue. The liver weighed 27 ounces. The spleen, which weighed 13 ounces, was hard and firm.

Microscopical examination showed the usual appearance of multilobular cirrhosis in a section comprising one of the large upstanding masses. The

hepatic cells were arranged in parallel columns which were roughly placed perpendicularly to the fibrous capsule enclosing the mass; the cells thus for the most part showed no trace of the usual lobular arrangement. Deeply placed in the mass, however, could be seen systems of cells, showing something of the lobular arrangement, enclosed among the parallel columns above described.

2. MULTIPLE ABSCESES IN LIVER; FOREIGN BODY IN THE VERMIFORM APPENDIX.

C. A—, æt. 20, glassblower, admitted March 23rd, died May 29th, 1897. Symptoms commenced eight weeks before admission to hospital with abdominal pain localised to the right iliac fossa; three weeks after the onset of pain he went to bed, and remained there until admission; he also complained of cough and shortness of breath.

On admission, the abdomen was a little distended on the right side; the liver could be felt below the costal margin to within $1\frac{1}{4}$ inches of the umbilicus; nothing else abnormal in abdomen. The lower right thorax was distinctly bulged, and scarcely moved on respiration; the lower intercostal spaces bulged slightly. The upper limit of liver dulness commenced at the fifth rib in the nipple line. Over the lower half of the right lung posteriorly, breath-sounds were faint and vocal resonance and fremitus were diminished. On April 1st a portion of the ninth rib was resected and 29 ounces of pus evacuated, apparently from above the diaphragm. After this his condition improved for a time, but his temperature again rose and the wound was explored on May 4th with a negative result. No improvement took place, and on May 16th the wound began to discharge bile; his temperature remaining high, and his general condition becoming worse, he was once more explored through the old wound; two pus-containing cavities were discovered below the diaphragm, apparently in the right lobe of the liver; these were drained. Injections of antistreptococcus serum were used, but he died on May 29th.

Post-mortem.—The appendix vermiformis was free from adhesions; on being opened it was found to contain a blackened pin $1\frac{1}{2}$ inches in length; the stem of the pin was enveloped in firm brown faecal matter, making it as big as a bone knitting-needle; the blind end of the appendix beyond the head of the pin was dilated into a small cyst. In the right lobe of the liver were four or five abscesses of varying size, with quite definite boundaries, full of inodorous pus; the largest contained 4 ounces of pus. There was also a subdiaphragmatic abscess including in its wall the upper half of the hinder surface of the right kidney. Another collection of pus was present above the diaphragm, forming a small localised empyema; the portal vein was normal.

V. DISEASES OF THE GENITO-URINARY SYSTEM.

TWO CASES OF HYDRONEPHROSIS; RETRO-PERITONEAL URETERO-LITHOTOMY; RECOVERY.

1. A. H —, female, æt. 23, admitted May 8th, discharged July 9th, 1897. Family and previous history unimportant. When patient was 15 years old she began to have attacks of pain in the right side of the abdomen; the attacks lasted from one to three days, and during them there was pain on micturition and blood in the urine; there was rarely more than a month's interval between successive attacks.

She first noticed abdominal swelling when she was 20; the swelling, however, frequently disappeared, but for the twelve months preceding admission to hospital it had been permanent.

On admission the right side of the abdomen was noticeably fuller than the left, and above and to the right of the umbilicus there was a definite, small, rounded prominence. On palpation there was evident a large mass in the right hypogastrium reaching as low as the umbilicus, apparently cystic in character. The urine contained on one occasion a trace of albumen, at other times it was normal.

On June 2nd Kelly's speculum was introduced into the urethra and the ureters catheterised; a stone could be felt in the right ureter, and it was also found to be palpable on bimanual examination. The stone was situated in the ureter near the cervix uteri.

On June 9th the calculus was removed by retro-peritoneal uretero-lithotomy. It weighed 27 grains, and measured $1\frac{1}{2}$ by $1\frac{1}{2}$ inches. It was composed of oxalate of lime, with an external coating of urates and phosphates. The hydronephrosis rapidly disappeared after the operation; the patient made an uninterrupted recovery, and was discharged free from pain on July 9th.

2. K. M —, female, admitted August 7th, discharged September 17th, 1897. Symptoms appear to have commenced ten years before admission, and a doctor is said to have stated that she was then suffering from renal calculus. For two years preceding admission to hospital she suffered periodically from pain in the left side of the abdomen; the pain would last about three days and used to recur in about six weeks' time. In the intervals between the attacks she was quite free from any pain. Latterly the pain had become more severe. No change in the quantity or character of the urine had been noticed.

On admission a rounded mass could be felt under the left costal margin, in the position of, and suggestive of, an enlarged left kidney. The urine contained a trace of albumen. For several days after admission she suffered severe pain, and the urine contained a considerable quantity of blood and albumen. *Per vaginam* the stone could be felt behind the cervix and on a level with the internal os.

On August 19th the calculus was removed by retro-peritoneal ureterolithotomy. It was cylindrical and measured $\frac{5}{8}$ by $\frac{3}{8}$ inch, and was covered with spicules. The hydronephrosis rapidly disappeared after the operation, and there was no more pain. For a few days the urine contained a little blood; at the time of her discharge there was still a trace of albumen.

VI. DISEASES OF THE NERVOUS SYSTEM.

1. POSTERIOR BASIC MENINGITIS; DEATH.

1. H. M. M—, male, æt. 22 months, admitted July 24th, died September 24th, 1897.

There was a strong history of phthisis on the father's side.

Patient's birth was instrumental, and the child is said to have had a fit on the night of its birth. At six months he had measles and whooping-cough.

Seven days before admission he had a screaming fit; the left arm and leg were stiff, his eyes turned up, teeth clenched, and tongue slightly bitten. A similar attack occurred the following day, and again two days later. He frequently gave a peculiar scream, and his head perspired profusely.

On admission he was well nourished; the thoracic viscera were normal; the bones gave the usual evidence of rickets. Knee-jerks were normal. There was some rigidity of limbs and neck. The child was irritable and cried a good deal. During the first fortnight there was fever of remittent type, frequently over 101° , and occasionally over 102° ; from the third week onward the temperature was normal save for an occasional slight evening rise. The child became drowsy; retraction of neck appeared, and gradually increased in degree. He took food fairly well, but at times vomited after every meal, and wasting became very marked. The child usually lay curled up in one position, taking no notice whatever of his surroundings and resenting interference. Not infrequently there were twitching movements of fingers and hands; râles and rhonchi appeared in both lungs, and he died after a stay in the hospital of sixty-two days. He was treated with small doses of bromide and syrup of iron. The constant vomiting was difficult to control, and on September 5th he was put on rectal feeding.

Post-mortem.—Body miserably wasted. Weight of brain, with fluid, 2 lbs. $4\frac{1}{4}$ oz. The skull was greatly enlarged, and the bones so thin as to be almost transparent. The anterior fontanelle was open. The subdural space contained some clear fluid that had evidently escaped from the ventricles through an orifice in the frontal lobe. There was an excess of fluid in the pia, especially at the base. At the base of the brain, from the optic tracts backward, the soft membranes were thickened and opaque; there was,

however, no lymph or other evidence of acute inflammation. The Sylvian fissures were healthy. The ventricles were enormously dilated, and their walls softened. No adhesions between the lower part of the cerebellum and the medulla which would suggest closure of the foramen of Magendie. The spinal canal, which was opened before the brain was touched, was much distended in the lumbar region; the flow of fluid continued when the body was suspended by the head; in fact, it became quite rapid. All the viscera were quite healthy, and there was not a suspicion of tubercle anywhere.

2. HEREDITARY ATAXY.

J. O—, male, æt. 26, admitted October 3rd, 1896, discharged January 23rd, 1897.

Family history.—Father is hemiplegic. Two sisters died of phthisis, one of heart disease; one sister living is very delicate. His only brother suffers from the same affection. No history obtainable of the disease in any other relatives.

Previous history.—He had rheumatic fever and also diphtheria with diphtheritic paralysis when eleven years old.

Weakness and ataxy were noticed after the attack of diphtheria, staggering when walking being the first symptom; deformity of feet soon developed. When sixteen his arms and hands became weak and clumsy, so that he was unable to follow his trade as a shoemaker. At eighteen he fell and broke his arm. He was twice an in-patient at the London Hospital, and was treated there by suspension. At nineteen his speech began to be affected, becoming slower, and since then he has been unable to walk. He had been in several other hospitals and homes. Occasionally he was troubled with incontinence of urine and fæces.

On admission he was quite unable to walk alone, or even to stand upright unless supported. There was well-marked double equino-varus, with hyperextension of toes, especially the great toe, while the phalangeal joints were flexed. Muscular sense was poor. Knee-jerks were absent; plantar reflexes present. Sensation was unaffected. There was slight loss of normal sphincter control. There was considerable scoliosis, with the usual accompanying deformity of chest.

As regards the arms, both co-ordination and muscular sense were bad, and there was some tendency to claw-hand. The eyes showed only a slight degree of nystagmus. Speech was slow and blurred. No tremors.

A systolic murmur was audible over the whole præcordium, and at times a diastolic murmur along the left sternal edge. No change occurred during his stay in the hospital.

3. HÆMORRHAGE INTO CERVICAL CORD; RECOVERY.

J. E. W—, male, æt. 22, admitted January 26th, discharged May 8th, 1897. Family and previous history unimportant, no history of syphilis. Eight days before admission, while wrestling in bed with a friend, he was thrown forwards with considerable force, and found himself suddenly com-

pletely paralysed in both arms and legs, with complete loss of sensation in body and limbs; by the evening of the same day he had regained power in legs, and by next morning sensation had returned. He experienced considerable pain in the cervical region shortly after the accident.

On admission he was a well-built man. His neck was stiff and tender, and there was some swelling at the level of the fourth and fifth cervical spines. Both pupils reacted to light and accommodation, and the left was slightly larger than the right. There was little or no movement possible at the shoulder-joints; the upper arm muscles were very weak; the supinator longus was paralysed on both sides; movements at wrists and fingers could be carried out feebly. The extent of the paralysis was such as to render the patient quite unable to feed himself. Sensation was normal. The upper intercostal muscles did not act well. Legs and sphincters unaffected.

During his stay in hospital power returned to a slight degree; there was some tendency to spasm in the lower extremities, and the knee-jerks became very brisk.

He was seen in the Electrical Department in October; by that time the action of both upper extremities was perfect, the head was bent a little forward and could not be fully extended. There was also a large firm lump in the back of the neck at the site of the old injury, possibly hæmorrhage.

VI. POISONING.

1. LEAD POISONING; EPILEPTIFORM CONVULSIONS; DEATH.

G. G—, male, fitter, æt. 38, admitted August 1st, died August 2nd, 1897. He was stated to have had two fits six months before admission. There was a strong history of alcohol, and he had been suffering from lead colic for a fortnight when admitted.

On August 1st he fell down in a fit, in which he is said to have struggled but did not bite his tongue nor pass urine.

On admission he was unconscious; there was a contusion over the right eye, and he was bleeding from the nose; he was very restless, his pupils reacted to light, and there was a marked blue line on gums; urine contained no albumen. On the following day he became quieter, but did not regain consciousness; in the afternoon he developed a series of general convulsions in which he died. In hospital he only passed 13 ounces of urine. Temperature rose to 101.6° before death.

Post-mortem.—The body was well developed. The brain and its membranes showed no evidence of disease; the sinuses were healthy and there was no fracture of skull. There was no evidence of renal disease, the kidneys being normal and the heart not hypertrophied. The lungs were œdematous; at each apex was a fibrous scar, and in one a small cretaceous nodule. No deposit in great toe joints. Remaining viscera healthy.

2. HYDROCHLORIC ACID POISONING; STRICTURE OF PYLORUS; DEATH.

J. L—, æt. 19, labourer, admitted March 4th, discharged March 15th, 1897. On the night before admission he drank a large spoonful from a bottle of strong hydrochloric acid, mistaking it for whisky. He presented the ordinary symptoms of corrosive poisoning, and was treated with alkalies, &c. There was general abdominal pain; he vomited frequently, and the vomit contained a little blood. His symptoms soon disappeared, and he was discharged on March 15th.

He was readmitted on March 22nd and died on July 8th, 1897.

On readmission he complained of pain at the level of the cricoid cartilage, and also in the region of the cardiac end of the stomach. The pain was only experienced on swallowing, and he vomited after all food. A large bougie encountered slight obstruction just above the cardiac orifice. On March 27th he was seized with violent abdominal pain, vomited coffee-ground fluid, melæna was present in stools, and he became very collapsed. Abdominal section was performed; the stomach was seen to be very full of blood, and some also was present in the intestines. The stomach was not opened. On April 7th, two days after the removal of the stitches, the wound gave way, and had to be re-sutured, healing without further difficulty.

During the next few weeks his condition showed no improvement, vomiting was frequent and his stomach was obviously dilating.

On May 17th the old wound was opened up; the stomach was incised and the pylorus was found to be so constricted as only to allow the passage of a small probe; the stricture was freely divided. A stricture was also found at the lower end of the œsophagus, admitting only a small œsophageal tube.

After the operation he was fed through the abdominal wound; this gradually contracted, and it was decided to attempt to relieve the œsophageal stricture.

On July 2nd the abdominal wound was again opened up. It was found that the œsophageal stricture would only allow the passage of a bullet probe; this was passed, and with some difficulty the stricture was divided. The operation was borne well, but no improvement took place, and he died on July 8th.

Post-mortem.—The body was extremely emaciated. The mucous membrane of the œsophagus for $2\frac{1}{2}$ inches, commencing opposite the bifurcation of the trachea, was thickened and eroded, and contained a perforation $\frac{1}{4}$ inch in diameter, which communicated with an abscess cavity in front of the spine. This in turn had spread into the right pleura, setting up an empyema. The edges of the semi-cartilaginous pyloric stricture which had been divided during life could easily be felt.

SURGICAL REPORT.

1897.

By E. OWEN THURSTON, M.B., B.S.LOND., F.R.C.S.ENG.

General Surgical Statement.

Number of surgical beds—256 (this includes all beds in children's ward).

,, of surgical patients in hospital, January 1st, 1897				{ Males 140
				{ Females 104
,, ,, ,, ,, December 31st, 1897				{ Males 129
				{ Females 81
,, ,, ,, treated to a termination in 1897 . . .				3700

	Total.	Males.	Females.
Discharged cured	2487	1577	910
,, relieved	817	466	351
,, unrelieved	173	109	64
Died	223	140	83
Totals	3700	2292	1408

Average number of days in hospital—23·006.

Death rate=6·027 per cent.

(Ophthalmic cases are not included in the above statement.)

TABLE I.—*Abstract, showing Diseases, &c., in Classes,*

DISEASE.	Sex.		Age.								Duration before admission.							
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60	Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-6	Mts. 6-12	Chronic.	Not stated.
GENERAL DISEASES.																		
Erysipelas . . .	38	33	9	7	12	8	15	7	7	6	36	15	1	...	...	...	...	19
Pyæmia . . .	1	3	...	...	...	3	1	...	...	...	...	...	3	1	...	...	...	...
Tetanus . . .	4	...	...	...	2	1	...	...	1	...	2	2	...	...	...	...	...	...
Actinomycosis . .	1	1	...	...	...	1	1	...	...	...	...	...	...	2	...	...	...	...
Anthrax infection .	2	...	...	...	1	...	1	...	...	...	1	1	...	...	...	...	...	...
Cancrum oris . . .	1	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...
Septicæmia . . .	...	5	...	...	1	3	1	...	...	...	2	...	1	1	...	...	...	1
Syphilis, congenital	4	6	4	1	5	...	...	...	...	...	...	...	1	1	3	1	2	2
„ secondary . . .	1	2	...	...	1	1	...	1	...	...	...	...	...	1	...	...	...	2
„ tertiary . . .	11	7	...	...	1	6	5	4	2	...	...	...	1	2	6	3	6	...
LOCAL DISEASES.																		
<i>Carcinoma—</i>																		
<i>Spheroidal—</i>																		
Breast . . .	...	39	...	...	...	...	3	15	12	9	...	...	3	5	9	9	12	1
„ recurrent in scar	...	8	...	...	...	1	...	2	2	3	2	3	...	...	1	1	1	...
„ „ in glands	...	5	...	...	...	...	...	4	...	1	...	1	1	2	...	1	...	...
Antrum . . .	2	...	...	...	...	...	...	1	1	...	...	...	...	...	...	1	1	...
Recurrent in orbit	1	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...
Neck . . .	1	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...
Thyroid . . .	...	2	...	...	...	...	...	...	...	2	...	...	...	...	...	2	...	...
Gall-bladder . . .	...	1	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...
Recurrent of ovary	...	1	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...
Œsophagus . . .	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...
<i>Columnar—</i>																		
Breast . . .	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...
Pylorus . . .	1	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...
Cæcum . . .	...	1	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...
Colon, splenic flexure	1	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...
Sigmoid flexure . .	2	...	...	...	...	...	1	...	1	...	...	...	...	...	2	...	...	...
Rectum . . .	11	10	...	...	...	...	4	8	4	5	...	...	1	3	7	5	4	1
„ recurrent . . .	1	1	...	...	...	...	1	1	...	...	...	...	...	1	...	...	1	...
<i>Squamous—</i>																		
Cheek . . .	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...
Lip . . .	6	...	...	...	...	...	...	1	1	4	...	...	...	1	3	...	2	...
Nose . . .	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...
Tongue . . .	16	...	...	...	...	...	...	...	8	8	...	...	...	4	7	3	1	1
„ recurrent . . .	2	...	...	...	...	...	...	...	...	2	...	...	...	1	1	...	...	...
Glands of neck . .	10	...	...	...	...	...	...	2	3	5	...	1	1	2	3	...	1	2

according to Authorised Nomenclature.

Duration of residence.										Result.				Remarks.
Dys. 1-4	Dys. 5-13	Wks 2-4	Mts 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Mts. +12		C.	R.	U.	D.	
9	44	16	2	...	...	...	...	...	66	...	...	5		Readmissions 2.
...	3	...	...	...	1	...	...	...	1	...	...	3		Puerperal 3.
2	1	...	1	...	...	...	...	...	1	...	...	3		See Special Table III for case arising in hospital.
...	...	...	...	...	2	...	...	...	1	...	...	1		<i>Vide</i> 'Reports' for 1896.
...	1	...	1	...	...	...	...	...	2	...	...	...		<i>Vide</i> 'Lancet,' Jan. 8th, 1898.
1	...	...	...	...	...	...	...	...	...	...	...	1		
1	2	2	...	...	...	...	...	...	3	...	...	2		All puerperal.
1	5	1	3	...	...	...	...	...	4	4	...	2		
...	2	1	...	...	...	...	...	...	2	1	...	...
...	5	9	3	...	1	...	...	...	8	10	...	...
...	4	24	10	1	...	...	...	...	29	5	5	...		
1	4	3	...	...	...	...	...	...	2	4	2	...		
...	1	1	3	...	...	...	...	...	1	4	...	...		Recurrent in glands and skin 3; supra-clavicular 2.
...	1	...	1	...	...	...	...	...	1	...	...	1		Total removal impossible in 1.
...	...	...	1	...	...	...	...	...	...	1	...	...		Primary growth in lachrymal gland.
...	1	1	...	...	...	...	...	...	1	1	...	...		Same case; no operation first admission.
...	1	...	...	...	...	...	...	...	...	...	...	1		Exploratory cœliotomy.
...	...	1	...	...	...	...	...	...	...	1	...	...
1	...	...	...	...	...	...	...	...	...	...	...	1		
...	...	1	...	...	...	...	...	...	1	...	...	...
...	...	1	...	...	...	...	...	...	...	...	...	1		Secondary glands in neck.
...	1	...	...	...	...	...	...	...	...	...	...	1		
...	1	...	...	...	...	...	...	...	...	...	...	1		Lateral anastomosis with Murphy's button.
...	2	...	...	...	...	...	...	...	...	...	2	...		
1	4	6	6	3	1	...	...	...	4	9	5	3		Obstruction 2; chronic intussusception 1; ovarian cyst 1.
...	1	1	...	...	...	...	...	...	...	1	...	1		Obstruction 1.
...	1	...	...	...	...	...	...	...	...	...	1	...		
1	3	2	...	...	...	...	...	...	5	...	1	...		Lower lip in all.
...	...	1	...	...	...	...	...	...	1	...	...	...
2	3	6	5	...	...	...	...	...	7	4	3	2		
...	...	1	1	...	...	...	...	...	2	...	...	...
1	3	5	1	...	...	...	...	...	1	7	2	...		In mouth and glands 2.

according to authorised Nomenclature—continued.

Duration of residence.									Result.				Remarks.
Dys. 1-4	Dys. 5-13	Wks 2-4	Mts 1-2	Mts 2-4	Mts 4-6	Mts 6-9	Mts 9-12	Mts. +12	C.	R.	U.	D.	
...	1	1	...	...	...	...	...	...	...	...	1	1	
...	...	...	1	1	...	...	...	...	1	...	...	1	Recurrent 1; spontaneous fracture 1; spindle-celled 1.
...	...	...	1	1	...	...	...	...	2	...	...	...	Periosteal 2; spindle-celled.
...	...	...	1	...	...	...	...	...	1	...	...	...	Central.
...	9	6	...	...	...	...	...	...	15	...	...	...
...	2	1	1	2	...	...	...	...	5	...	1	...	Bladder 3, larynx 1, neck 1, toe 1.
3	16	1	...	...	...	...	...	...	15	4	...	1	Nasal 15, rectal 5. Fatal case: septic meningitis.
15	15	...	...	...	...	...	...	...	30	...	...	...	Tonsils 18.
1	1	...	...	...	...	...	...	...	2	...	...	...
...	1	1	...	...	...	...	...	...	1	1	...	...	Readmission 1.
2	7	2	2	1	...	...	...	...	11	2	1	...	Subungual 3, tibia 5, fibula 1, femur 1, metacarpal 1, metatarsal 1.
...	...	...	1	...	...	...	...	...	1	...	...	...	In toe.
...	...	1	...	...	...	...	...	...	1	...	...	...
1	2	7	3	3	...	1	...	...	9	5	2	1	Fatal case: erysipelas.
...	1	2	1	...	...	...	...	...	...	...	4	...	
...	3	3	1	...	...	...	...	...	7	...	...	...	Naso-pharyngeal 1, keloid 2.
...	9	6	1	...	...	...	...	...	15	1	...	...	Cystic 2, lipoma of neck 1, of shoulder 1. Re-admission 1.
...	...	2	...	...	...	...	...	...	2	...	...	...	Skin 1, palate 1.
...	2	2	1	...	...	...	...	...	1	3	1	...	Uterus 5; enucleation 1.
...	2	1	...	...	...	...	...	...	3	...	...	...	Adenoids 1.
...	1	...	...	...	...	...	...	...	1	...	...	...
...	1	1	1	...	...	...	...	...	2	...	1	...	"At own request" 1.
...	5	...	3	...	...	...	...	...	7	1	...	...
...	1	1	...	...	...	...	...	...	2	...	...	...
...	2	1	1	...	...	...	...	...	3	1	...	...
...	3	...	...	...	...	...	...	...	1	2	...	...	Readmission 1.
2	2	...	...	...	...	...	...	...	4	...	...	...
...	...	...	...	1	1	...	...	...	1	...	...	1	Multiple of abdomen 1, pelvis 1.
...	5	1	...	...	...	...	...	...	6	...	...	...	Suppurating 3, phimosi 1.
1	...	...	...	...	...	...	...	...	1	...	...	...
...	1	...	...	...	...	...	...	...	1	...	...	...	Nature? suppurating.
...	...	1	...	...	...	...	...	...	1	...	...	...	No evidence of sarcoma.
...	1	1	2	2	...	...	...	...	4	...	1	1	Fatal case: carcinoma. Multiple 1, dermoid 1.
...	...	...	1	...	...	...	...	...	1	...	...	...	Cystic ovary 1.

TABLE I.—*Abstract, showing Diseases, &c., in Classes,*

DISEASE.	Sex.		Age.								Duration before admission.							
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60	Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-6	Mts. 6-12	Chronic.	Not stated.
LOCAL DISEASES — con-																		
<i>tinued.</i>																		
<i>Tumours, undetermined—</i>																		
Of abdomen . . .	...	3	...	...	...	1	2	...	...	...	...	...	...	...	1	1	1	...
Gall-bladder . . .	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...
Glands of neck . . .	2	...	...	...	...	...	1	...	...	1	...	...	...	1	...	...	1	...
Thyroid . . .	...	1	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...
Kidney . . .	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...
Bladder . . .	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...
Base of skull . . .	1	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...
Superior maxilla . . .	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...
Inferior maxilla . . .	1	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...
Humerus . . .	1	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...
DIGESTIVE SYSTEM.																		
Ulcer of tongue . . .	3	...	...	...	...	2	...	1	...	...	...	2	...	...	...	...	...	1
„ of mouth . . .	1	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...
„ of palate . . .	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...
Pharyngitis . . .	...	1	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...
Stenosis of pharynx . . .	1	1	...	...	2	...	...	...	...	...	...	...	...	...	...	...	1	1
Foreign body in œso- phagus . . .	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
Carious tooth . . .	...	2	...	...	...	1	...	1	...	...	...	...	...	1	...	...	...	1
Hernia—																		
Inguinal, reducible . . .	131	25	11	6	48	53	24	9	5	...	2	5	9	25	14	19	71	11
„ irreducible . . .	11	...	...	...	...	2	1	1	2	5	...	...	...	1	...	...	9	1
„ strangulated . . .	37	4	5	1	2	3	5	9	9	7	36	5	...	...	...	...	...	...
Femoral, reducible . . .	...	8	...	...	...	3	4	...	...	1	...	1	1	3	1	...	2	...
„ irreducible . . .	1	5	...	...	...	2	1	1	...	2	...	...	...	...	...	1	5	...
„ strangulated . . .	3	15	...	...	...	...	2	4	8	4	13	4	...	...	...	...	...	1
Umbilical, irreducible . . .	1	3	...	...	...	...	...	3	1	...	...	...	...	...	1	...	3	...
„ strangulated . . .	...	3	...	...	...	...	...	2	1	...	3	...	...	...	...	...	...	...
Ventral, reducible . . .	2	2	...	...	1	...	3	...	...	...	...	...	...	...	3	...	1	...
Appendicitis, acute . . .	1	3	...	...	1	1	1	...	...	1	...	2	1	...	...	...	...	1
„ chronic . . .	13	5	...	...	7	10	1	...	...	...	...	1	5	6	2	2	1	1
Perforated gastric ulcer . . .	1	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...
Acute gastric dilatation . . .	1	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...
Intussusception . . .	1	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
Stricture of gut . . .	1	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...
Volvulus . . .	...	1	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...
Matting of small gut . . .	2	...	...	...	...	...	...	...	2	...	...	...	...	2	...	...	...	...
Chronic intestinal ob- struction . . .	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
Abdominal pain . . .	1	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...
Fæcal fistula . . .	...	4	...	...	...	1	2	...	...	1	...	...	...	1	...	2	1	...

according to authorised Nomenclature—continued.

Duration of residence.									Result.				Remarks.
Yrs. 1-4	Dys. 5-13	Wks. 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Mts. +12	C.	R.	U.	D.	
1	1	...	1	...	...	...	...	...	...	1	2	...	Transferred to Medical side 2; cœliotomy 1.
...	...	1	...	...	...	...	...	...	...	...	1	...	Cœliotomy; probable carcinoma.
...	1	...	1	...	...	...	...	...	...	1	1	...	
...	...	1	...	...	...	...	...	...	...	...	1	...	Paralysis of right cord.
1	...	...	...	...	...	...	...	...	...	...	1	...	
...	1	...	...	...	...	...	...	...	...	...	1	...	
...	...	1	...	...	...	...	...	...	...	1	...	...
1	...	...	...	...	...	...	...	...	...	...	1	...	Probable carcinoma.
...	...	1	...	...	...	...	...	...	...	...	1	...	
...	...	...	1	...	...	...	...	...	...	...	1	...	? Sarcoma. "At own request."
2	1	...	...	...	...	...	...	...	3	...	...	...	Glossitis 1.
1	...	...	...	...	...	...	...	...	1	...	...	...
...	...	1	...	...	...	...	...	...	...	1	...	...	Tuberculous.
...	1	...	...	...	...	...	...	...	1	...	...	...	After removal of adenoids.
...	1	...	...	1	...	...	...	...	...	1	1	...	
...	...	1	...	...	...	...	...	...	1	...	...	...	Tooth-plate; œsophagotomy.
2	...	...	...	...	...	...	...	...	2	...	...	...
3	6	115	30	2	...	...	...	...	148	4	4	...	
1	1	6	3	...	...	...	...	...	8	3	...	...
13	4	17	6	1	...	...	...	...	34	...	...	7	
...	...	4	4	...	...	...	...	...	5	2	...	1	Fatal case: pyæmia. <i>Vide</i> Special Table III.
...	...	2	4	...	...	...	...	...	5	1	...	...
3	4	10	1	...	...	...	...	...	12	...	...	6	
2	...	...	2	...	...	...	...	...	2	1	1	...	"At own request" 1; inflamed 2.
...	1	2	...	...	...	...	...	...	3	...	...	...	Radical cure 2.
1	...	3	...	...	...	...	...	...	2	1	1	...	Readmission 1.
2	...	2	...	...	...	...	...	...	2	...	...	2	
1	...	8	8	1	...	...	...	...	17	...	1	...	
1	...	...	...	...	...	...	...	...	...	...	...	1	
1	...	...	...	...	...	...	...	...	...	...	...	1	<i>Vide</i> Clinical Society's 'Transactions,' 1898.
1	...	...	...	...	...	...	...	...	...	...	...	1	Ileo-cæcal.
1	...	...	...	...	...	...	...	...	...	...	...	1	
...	...	...	1	...	...	...	...	...	1	...	...	...	Chronic.
...	1	...	1	...	...	...	...	...	1	1	...	...	Readmission 1.
1	...	...	...	...	...	...	...	...	...	...	1	...	"At own request."
...	1	...	...	...	...	...	...	...	1	...	...	...	Previous excision of cæcum for carcinoma.
...	1	...	2	1	...	...	...	...	1	3	...	...	Vesico-intestinal fistula 1.

TABLE I.—Abstract, showing Diseases, &c., in Classes.

DISEASE.	Sex.		Age.								Duration before admission.							
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60	Dys. 1-4	Dys. 5-13	Wks. 2-4	Mts. 1-2	Mts. 2-6	Mts. 6-12	Chronic.	Not stated.
DIGESTIVE SYSTEM—continued.																		
Ulcerative colitis . . .	2	...	...	...	...	...	...	2	...	...	...	...	...	...	...	2	...	...
Fistula in ano . . .	29	3	...	...	...	13	11	6	2	...	1	1	1	9	10	3	6	1
Hæmorrhoids . . .	48	31	...	...	2	14	23	22	14	4	...	1	1	5	5	5	59	3
Stricture of rectum . . .	1	4	...	...	...	2	1	1	1	...	...	...	...	...	...	2	2	1
Fissure in ano . . .	2	3	...	...	...	2	1	1	...	1	...	...	...	1	4	...	...	...
Ulcer of rectum . . .	2	3	...	...	...	1	2	1	1	...	...	1	1	...	...	1	...	2
Prolapse of rectum . . .	...	2	...	...	...	...	2	...	...	...	...	...	...	...	...	...	2	...
? Polypus of rectum . . .	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Tuberculous peritonitis . . .	...	2	...	...	2	...	...	...	...	...	...	...	...	...	2	...	...	...
Peritoneal adhesions . . .	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
Cholelithiasis . . .	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
Abdominal pain . . .	...	2	...	...	...	...	...	2	...	...	...	...	...	...	...	1	1	...
? Of abdomen . . .	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...
GENITO-URINARY SYSTEM.																		
Stricture . . .	60	...	...	...	...	4	16	13	16	11	...	1	1	4	7	1	38	8
Acute prostatitis . . .	5	...	...	...	...	5	...	...	...	...	...	...	...	1	...	...	...	4
Enlarged prostate . . .	20	...	...	...	...	...	...	...	4	16	...	...	4	...	2	3	4	7
Gonorrhœal warts . . .	2	2	...	...	2	2	...	...	...	...	...	...	1	1	1	1	...	...
Urethritis . . .	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
Phagedæna . . .	2	...	...	...	...	2	...	...	...	...	...	...	2	...	...	...	...	...
Paraphimosis . . .	5	...	2	1	...	2	...	...	...	...	1	...	1	...	...	...	...	3
Phimosis . . .	12	...	4	2	2	3	...	...	1	...	...	...	1	1	...	1	9	...
Soft chancres . . .	1	1	...	...	1	1	...	...	...	...	...	...	2	...	...	...	...	...
Ulceration of vulva . . .	...	1	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...
Œdema of scrotum . . .	2	...	2	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1
Balanitis . . .	3	...	1	...	1	1	...	...	...	...	1	...	2	...	...	...	...	...
Hæmorrhage from urethra . . .	1	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...
Urethral caruncle . . .	...	2	...	...	...	...	1	...	1	...	...	...	...	1	...	1	...	...
Hat-pin in urethra . . .	1	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...
Cystitis . . .	3	2	...	...	...	1	1	1	...	2	...	1	...	...	2	...	2	...
Tuberculous bladder . . .	2	...	...	...	1	...	1	...	...	...	...	...	...	...	2	...	...	...
Foreign body in bladder . . .	1	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...
Incontinence . . .	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...
Moveable kidney . . .	...	6	...	...	...	1	4	1	...	...	...	...	...	...	1	2	3	...
Nephralgia . . .	5	1	...	...	...	1	3	2	...	...	...	...	...	3	...	...	3	...
Tuberculous kidney . . .	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...
Renal calculus . . .	7	2	...	...	...	2	4	...	3	...	...	...	1	...	2	1	3	2
Pyonephrosis . . .	...	2	...	...	...	...	2	...	...	...	...	...	...	...	...	1	1	...
Hydronephrosis . . .	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...
Vesical calculus . . .	6	...	3	1	...	...	...	...	1	1	...	...	...	...	1	...	4	1
Urethral calculus . . .	4	...	1	...	1	1	...	...	...	1	1	1	...	...	...	...	...	2

According to authorised Nomenclature—continued.

Duration of residence.									Result.				Remarks.
s.	Dys.	Wks	Mts.	Mts.	Mts.	Mts.	Mts.	Mts.	C.	R.	U.	D.	
4	5-13	2-4	1-2	2-4	4-6	6-9	9-12	+12					
1	...	...	...	1	...	...	...	...	...	1	1	...	Readmission 1.
1	11	16	4	...	...	...	...	...	30	1	1	...	
4	11	54	10	...	...	...	...	...	68	10	1	...	
1	1	2	1	...	...	...	...	...	1	1	1	2	Previous colotomy 1.
2	3	...	...	...	...	...	...	...	5	...	...	...
1	2	1	1	...	...	...	...	...	3	1	...	1	Tuberculous 1. Fatal case: abscess of liver.
...	...	1	1	...	...	...	...	...	1	1	...	...
...	...	1	...	...	...	...	...	...	...	1	...	...
...	1	1	...	...	...	...	...	...	...	2	...	...	Readmission; abscess of abdominal wall.
...	...	...	1	...	...	...	...	...	1	...	...	...
...	...	...	1	...	...	...	...	...	1	...	...	...
...	1	1	...	...	...	...	...	...	...	2	...	...	Previous cholecystotomy.
...	1	...	...	...	...	...	...	...	...	1	...	...	? Malignant.
4	11	23	16	6	...	...	...	...	31	23	2	4	Pyæmia 1. <i>Vide</i> Special Table III.
...	4	1	...	...	...	...	...	...	3	2	...	...	Readmission 2. Abscess 1.
3	4	6	5	2	...	...	...	...	1	13	...	6	Prostatectomy 1.
...	1	2	1	...	...	...	...	...	4	...	...	...
...	...	1	...	...	...	...	...	...	1	...	...	...
...	...	2	...	...	...	...	...	...	2	...	...	...
...	5	...	...	...	...	...	...	...	5	...	...	...
3	5	2	2	...	...	...	...	...	11	...	...	1	Fatal case: extravasation.
...	1	1	...	...	...	...	...	...	2	...	...	...
...	1	...	...	...	...	...	...	...	1	...	...	...
2	...	...	...	...	...	...	...	...	2	...	...	...
1	1	1	...	...	...	...	...	...	3	...	...	...
...	1	...	...	...	...	...	...	...	1	...	...	...
...	1	1	...	...	...	...	...	...	2	...	...	...
1	...	...	...	...	...	...	...	...	1	...	...	...
...	2	2	...	1	...	...	...	...	1	4	...	...
...	...	2	...	...	...	...	...	...	...	2	...	...
...	...	...	1	...	...	...	...	...	1	...	...	...	Piece of wood.
...	1	...	...	...	...	...	...	...	1	...	...	...
...	...	1	4	1	...	...	...	...	4	2	...	...
...	2	...	2	2	...	...	...	...	2	4	...	...	Readmissions 2.
...	...	...	1	...	...	...	...	...	...	1	...	...
2	1	2	4	...	...	...	...	...	4	...	1	4	"At own request" 1. Fatal: uræmia 1, hydro-nephrosis 2.
...	...	1	...	...	1	...	...	...	...	1	...	1	Readmission 1.
...	1	...	...	...	...	...	...	...	...	...	...	1	Congenital.
...	...	2	4	...	...	...	...	...	4	1	...	1	Readmission 1.
2	1	1	...	...	...	...	...	...	4	...	...	...

TABLE I.—Abstract, showing Diseases, &c., in Classes

DISEASE.	Sex.		Age.								Duration before admission.							
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60	Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-6	Mts. 6-12	Chronic.	Not stated
GENITO-URINARY SYSTEM																		
—continued.																		
Hæmaturia . . .	1	1	...	...	...	...	1	...	...	1	...	...	...	...	1	...	1	...
Painful micturition . . .	2	...	...	1	...	1	...	...	...	...	...	...	...	1	...	...	1	...
Undescended testis . . .	15	...	...	3	11	1	...	...	...	...	...	...	...	...	...	...	15	...
Tuberculous testis . . .	8	...	...	1	1	1	3	2	...	...	...	...	...	1	2	2	1	2
Syphilitic testis . . .	5	...	...	...	...	2	3	...	...	...	...	...	...	...	1	2	2	...
Acute orchitis . . .	3	...	...	...	...	1	...	2	...	...	1	...	1	...	...	...	...	...
Orchitis, chronic . . .	1	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...
Hydrocele of tunica vaginalis . . .	17	...	...	1	5	4	3	2	...	2	...	...	...	1	4	2	7	3
" of cord . . .	2	...	...	...	2	...	...	...	...	...	...	1	...	...	1	...	...	...
" of canal of Nuck . . .	...	2	1	...	...	...	1	...	...	...	...	...	2	...	...	...	...	...
Spermatocele . . .	1	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...
Subacute mastitis . . .	...	5	...	...	...	...	3	2	...	...	...	...	...	...	2	3	...	...
Tuberculous mastitis . . .	...	3	...	...	2	...	1	...	...	...	...	...	...	...	3	...	...	...
Chronic interstitial mastitis . . .	...	9	...	...	...	2	5	1	1	...	...	...	...	2	3	2	1	1
Galactoceles . . .	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...
Endometritis . . .	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...
Pyosalpinx . . .	...	1	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...
Tuberculous Fallopian tube . . .	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...
Tubal gestation . . .	...	1	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...
CIRCULATORY SYSTEM.																		
Popliteal aneurysm . . .	2	...	...	...	...	2	...	...	...	...	...	2	...	...	...	...	...	...
Abdominal aneurysm . . .	2	...	...	...	...	2	...	...	...	...	...	...	...	...	...	1	1	...
Aortic aneurysm . . .	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
Arterio-venous aneurysm . . .	1	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...
Varicose veins . . .	53	43	...	...	17	59	13	5	2	...	...	2	...	3	7	4	62	18
Varicocele . . .	88	...	...	...	53	30	3	1	1	...	...	8	4	3	15	5	30	23
Gangrene, senile . . .	4	2	...	...	...	...	...	...	1	5	...	...	...	3	2	1	...	...
" glycosuric . . .	3	...	...	...	...	...	...	...	2	1	...	...	2	...	...	1	...	...
" albuminuric . . .	...	1	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...
Thrombosis of veins . . .	5	9	...	...	2	3	2	2	2	3	2	5	2	...	2	...	...	3
Hæmorrhage . . .	...	3	...	1	...	2	...	...	...	...	3	...	...	...	...	...	...	...
LYMPHATIC SYSTEM.																		
Adenitis, simple . . .	9	2	...	...	3	4	...	3	1	...	...	1	4	1	2	1	1	1
" tuberculous . . .	35	64	4	12	29	35	12	4	2	1	...	2	6	18	26	22	22	3
Lymphangitis . . .	4	2	...	...	...	5	...	1	...	...	4	...	...	...	...	...	...	2

According to authorised Nomenclature—continued.

Duration of residence.										Result.				Remarks.
Wks.	Dys.	Wks.	Mts.	Mts.	Mts.	Mts.	Mts.	Mts.	Mts.	C.	R.	U.	D.	
4	5-13	2-4	1-2	2-4	4-6	6-9	9-12	+12						
...	1	...	1	...	...	...	...	...	...	2	...	...	...	Cause ? 2.
1	1	...	...	...	...	...	...	...	...	1	1	...	...
...	1	9	5	...	...	...	...	...	...	14	...	1	...	Reducible inguinal hernia 3, orchitis 1.
...	4	3	...	1	...	...	...	...	...	2	6	...	...	Prostate affected 1.
...	1	2	2	...	...	...	...	...	...	5	...	...	...	Castration 2. Tuberculous as well 1.
...	2	1	...	...	...	...	...	...	...	3	...	...	...
...	1	...	...	...	...	...	...	...	...	1	...	...	...	Nature ?
1	2	14	...	...	...	...	...	...	...	17	...	...	...	Suppurating 1.
...	2	...	...	...	...	...	...	...	...	2	...	...	...
...	...	1	1	...	...	...	...	...	...	2	...	...	...
...	1	...	...	...	...	...	...	...	...	1	...	...	...
...	3	2	...	...	...	...	...	...	...	5	...	...	...
...	1	2	...	...	...	...	...	...	...	3	...	...	...
1	3	5	...	...	...	...	...	...	...	7	...	2	...	With cysts 2.
...	...	1	...	...	...	...	...	...	...	1	...	...	...
...	...	1	...	...	...	...	...	...	...	...	...	1	...	Transferred to Adelaide.
...	1	...	...	...	...	...	...	...	...	1	...	...	...	Retro-peritoneal abscess discharged <i>per vaginam</i> .
...	...	...	1	...	...	...	...	...	...	...	...	1	...	Tuberculous peritonitis.
1	...	...	...	...	...	...	...	...	...	...	...	1	...	Ruptured; coeliotomy.
...	...	...	1	1	...	...	...	...	...	2	...	...	...	Recurrent; readmission 1.
...	1	...	1	...	...	...	...	...	...	2	...	...	...	Readmission 1.
1	...	...	...	...	...	...	...	...	...	...	...	1	...	Pressure upon trachea.
...	...	1	...	...	...	...	...	...	...	1	...	...	...	Radial artery.
4	12	67	13	...	...	...	...	...	...	79	10	7	...	"At own request" 3; ulcer 5; double 28; lower extremity in all.
4	30	53	...	1	...	...	...	...	...	83	1	4	...	Double 5; reducible inguinal hernia 1; varicose veins 1.
...	...	1	5	...	...	...	...	...	...	2	2	...	2	
1	...	...	1	1	...	...	...	...	...	1	1	...	1	
...	...	1	...	...	...	...	...	...	...	...	...	...	1	
...	6	5	2	1	...	...	...	...	...	12	2	...	...	Phthisis 1; ulcer 1.
3	...	...	...	...	...	...	...	...	...	3	...	...	...	After tonsillotomy 1, turbinotomy 1, tooth extraction 1.
2	5	3	1	...	...	...	...	...	...	10	1	...	...
4	40	38	16	1	...	...	...	...	...	66	28	5	...	
1	5	...	...	...	...	...	...	...	...	6	...	...	...

TABLE I.—*Abstract, showing Diseases, &c., in Classes.*

DISEASE.	Sex.		Age.								Duration before admission.							
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60	Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-6	Mts. 6-12	Chronic.	Not stated.
THYROID.																		
Goitre, parenchymatous .	1	5	...	...	4	...	...	2	...	...	...	...	...	...	2	1	3	...
„ adenoma .	...	4	...	...	...	1	...	2	...	1	...	...	...	...	...	...	4	...
„ cyst .	...	4	...	...	1	...	2	...	...	1	...	...	1	...	1	...	2	...
OSSEOUS SYSTEM.																		
<i>Acute epiphysitis—</i>																		
Femur .	2	1	1	...	2	...	...	...	...	...	1	...	1	...	...	...	...	1
Humerus .	1	1	2	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...
<i>Tuberculous epiphysitis—</i>																		
Tibia .	3	...	...	...	3	...	...	...	...	...	...	...	...	1	...	1	1	...
<i>Acute infective osteomyelitis—</i>																		
Frontal bone .	2	1	2	...	1	...	...	...	...	...	2	...	...	...	1	...	...	...
Humerus .	1	1	...	...	2	...	...	...	...	...	2	...	...	...	...	...	...	...
Ilium .	1	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...
Femur .	2	3	3	...	2	...	...	...	...	...	2	1	1	...	...	...	...	1
Tibia .	4	...	...	1	3	...	...	...	...	...	1	1	2	...	...	...	...	...
Fibula .	4	...	...	1	3	...	...	...	...	...	2	1	1	...	...	...	...	...
Metatarsal .	1	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...
<i>Periostitis—</i>																		
Skull .	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...
Tibia .	2	1	...	...	...	1	1	...	...	1	1	...	...	...	1	...	...	1
<i>Osteitis—</i>																		
Ilium .	...	1	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...
Femur .	2	...	...	...	...	...	1	1	...	...	...	...	...	...	1	...	1	...
Tibia .	2	1	...	...	1	1	1	...	...	...	...	...	...	...	2	...	1	...
Osteitis deformans	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...
<i>Caries—</i>																		
Superior maxilla .	2	...	2	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...
Humerus .	...	1	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...
Radius .	1	2	2	...	1	...	...	...	...	...	...	1	1	1	...	...	...	...
Ulna .	...	1	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...
Phalanges .	1	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...
Sternum .	2	...	1	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...
Ribs .	11	3	2	2	4	5	1	...	...	...	...	...	2	3	3	1	...	1
Ilium .	8	6	...	...	5	7	1	1	...	...	...	...	...	2	1	2	9	...
Ischium .	1	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...
Femur .	5	5	...	1	4	2	2	...	1	...	...	2	1	1	2	1	3	...

according to authorised Nomenclature—continued.

Duration of residence.										Result.				Remarks.
Dys. 1-4	Dys. 5-13	Wks 2-4	Mts 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Mts. +12		C.	R.	U.	D.	
1	1	...	4	...	...	...	...	...		2	4	...	...	Dyspnœa 1.
...	...	3	1	...	...	...	...	...		4	...	...	...	Cystic 1.
...	1	3	...	...	...	...	...	...		4	...	...	...
...	...	...	1	...	...	2	...	...		1	2	...	...
1	...	...	1	...	...	...	...	...		1	...	...	1	
...	...	...	3	...	...	...	...	...		3	...	...	...
...	2	...	1	...	...	...	...	...		2	...	1	...	Fatal case: cerebral abscess. <i>Vide</i> Reports, 1896.
...	2	...	...	...	...	...	...	...		1	...	1	...	
...	...	...	1	...	...	...	...	...		1	...	...	...
...	1	1	2	...	...	1	...	...		2	1	...	2	Pyæmia. <i>Vide</i> Special Table III.
1	1	...	1	1	...	...	...	...		1	2	...	1	Septicæmia 1.
...	...	1	...	3	...	...	...	...		1	3	...	...
...	...	...	...	1	...	...	...	...		1	...	...	...
...	1	...	...	...	...	...	...	...		...	1	...	...	Gummatous.
1	2	...	...	...	...	...	...	...		2	...	1	...	Gummatous 1, traumatic 2.
...	...	...	1	...	...	...	...	...		1	...	...	...
...	1	1	...	...	...	...	...	...		...	2	...	...	Syphilitic 1.
...	1	1	1	...	...	...	...	...		2	1	...	...	Gummatous 1.
...	...	...	1	...	...	...	...	...		...	1	...	...
...	1	1	...	...	...	...	...	...		1	1	...	...	Readmission.
...	1	...	...	...	...	...	...	...		1	...	...	...
...	1	1	...	1	...	...	...	...		2	1	...	...
...	...	1	...	...	...	...	...	...		1	...	...	...
...	...	...	1	...	...	...	...	...		1	...	...	...
...	...	2	...	...	...	...	...	...		1	1	...	...
1	3	1	8	1	...	...	...	...		5	8	1	...	Os calcis 3. Epileptic insanity 1.
...	2	3	6	2	...	...	1	...		1	1	1	1	Refused operation 1.
...	...	...	...	1	...	...	...	...		...	1	...	...
...	...	1	7	2	...	...	...	...		7	3	...	...	Gummatous 1.

TABLE I.—Abstract, showing Diseases, &c., in Classes.

DISEASE.	Sex.		Age.								Duration before admission.							
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60	Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts 2-6	Mts. 6-12	Chronic.	Not stated.
OSSEOUS SYSTEM — con-																		
<i>tinued.</i>																		
<i>Caries—continued.</i>																		
Sacrum	1	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...
Tibia	4	...	2	...	2	...	...	...	...	...	...	...	...	1	2	1	...	...
Tarsus	5	7	...	2	6	3	...	1	...	...	...	...	...	...	6	3	3	...
Metatarsus	3	3	...	1	4	1	...	...	...	...	...	...	1	...	2	...	2	1
Metacarpus	2	...	1	...	...	1	...	...	...	...	...	...	...	...	1	...	1	...
<i>Necrosis—</i>																		
Inferior maxilla . .	8	4	1	4	...	3	2	1	1	...	...	...	1	2	5	3	1	...
Tibia	7	6	...	1	8	...	1	2	...	1	...	1	1	1	4	1	1	4
Femur	2	3	2	2	7	...	2	...	1	1	...	...	...	...	...	5	3	7
Malar	1	5	3	1	1	...	1	...	...	...	...	1	...	...	2	...	1	...
Superior maxilla . .	2	3	...	...	2	...	...	2	...	1	...	...	...	2	1	...	2	...
Calvarium	2	...	...	...	1	...	1	...	...	...	...	...	...	1	1	...	...	...
Nasal bones . . . .	...	3	...	...	3	...	...	...	...	...	...	...	...	1	...	...	2	...
Palate . . . . .	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...
Humerus	3	1	...	...	3	1	...	...	...	...	...	...	...	2	...	...	1	1
Sternum	1	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...
Radius . . . . .	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...
Os calcis	1	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...
Fibula . . . . .	...	1	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...
Ilium	1	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...
Carpus	1	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...
Metacarpus	3	...	3	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...
Metatarsal	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...
Phalanges	4	1	...	1	1	2	1	...	...	...	...	1	...	2	1	1	...	...
ARTICULAR SYSTEM.																		
<i>Shoulder—</i>																		
Tuberculous arthritis .	4	...	...	1	1	1	1	...	...	...	...	...	...	...	...	1	3	...
Arthritis . . . . .	...	1	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...
<i>Elbow—</i>																		
Tuberculous arthritis .	3	3	3	...	1	...	...	1	...	1	...	1	...	...	...	3	2	...
Ankylosis	5	2	1	2	...	3	...	1	...	...	...	...	...	1	3	2	1	...
<i>Wrist—</i>																		
Tuberculous arthritis .	3	5	...	...	1	1	3	1	2	...	...	...	...	...	...	5	2	1
Ankylosis	2	2	...	...	...	1	2	...	...	1	...	...	...	1	1	2	...	...
<i>Hip—</i>																		
Tuberculous arthritis .	21	31	11	13	26	2	...	...	...	...	1	...	1	3	9	10	21	7
Osteo-arthritis . . .	1	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...

according to authorised Nomenclature—continued.

Duration of residence.									Result.				Remarks.
Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Mts. +12	C.	R	U.	D.	
...	...	...	1	...	...	...	...	...	...	1	...	...
...	...	2	1	...	1	...	...	...	1	2	...	1	Fibula 1. Fatal: necrosis of skull.
...	...	4	6	1	1	...	...	...	3	9	...	...	Phthisis 1, readmissions 4, tuberculous glands 1.
...	1	3	2	...	...	...	...	...	3	3	...	...
...	1	1	...	...	...	...	...	...	...	2	...	...
1	5	5	1	...	...	...	...	...	8	3	1	...	"At own request" 1.
1	3	2	4	1	1	1	...	...	7	5	1	...	Syphilitic 2, caries 1, ununited fracture 1.
...	3	5	4	2	1	...	...	...	8	7	...	...	Spontaneous fracture 1.
...	...	3	2	1	...	...	...	...	4	2	...	...	Tibia 3; same case.
1	1	2	1	...	...	...	...	...	2	3	...	...	Nasal bones 2, congenital syphilis 2.
...	...	1	...	1	...	...	...	...	1	1	...	...	Syphilitic 1.
...	2	...	...	1	...	...	...	...	2	1	...	...	Syphilitic 3.
...	1	...	...	...	...	...	...	...	1	...	...	...
...	...	2	1	1	...	...	...	...	3	1	...	...
...	...	1	...	...	...	...	...	...	...	...	...	1	See under "Cysts."
...	1	...	...	...	...	...	...	...	...	1	...	...
...	...	...	1	...	...	...	...	...	...	1	...	...
...	...	1	...	...	...	...	...	...	1	...	...	...
...	...	...	1	...	...	...	...	...	1	...	...	...
...	...	2	1	...	...	...	...	...	...	3	...	...	Readmission; caries of malar.
...	...	1	...	...	...	...	...	...	1	...	...	...
...	1	3	1	...	...	...	...	...	5	...	...	...
...	...	2	2	...	...	...	...	...	1	2	1	...	Caries sicca 1.
...	1	...	...	...	...	...	...	...	...	1	...	...	? Tubercle.
...	...	2	2	2	...	...	...	...	2	3	...	1	Tuberculous dactylitis 2.
...	2	...	4	1	...	...	...	...	3	4	...	...
1	2	3	2	...	...	...	...	...	3	5	...	...
...	2	1	1	...	...	...	...	...	1	3	...	...
1	8	14	14	8	3	3	...	1	4	44	1	3	Readmissions 8.
...	...	1	...	...	...	...	...	...	...	1	...	...

TABLE I.—Abstract, showing Diseases, &c., in Classes

DISEASE.	Sex.		Age.								Duration before admission.							
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60	Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-6	Mts. 6-12	Chronic.	Not stated
ARTICULAR SYSTEM—con-																		
<i>tinued.</i>																		
<i>Hip—continued—</i>																		
Charcot's	2	...	...	...	...	...	...	...	2	...	...	...	1	1	...	...	...	...
Hysterical . . . . .	...	5	...	...	2	3	...	...	...	...	...	1	...	1	2	1	...	...
Synovitis	1	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...
Post-typhoid dislocation . . . . .	...	1	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...
Ankylosis	2	4	...	...	2	3	1	...	...	...	...	...	...	...	2	1	3	...
<i>Knee—</i>																		
Tuberculous arthritis	24	20	6	8	17	5	6	2	...	...	...	...	...	1	4	9	20	10
Gonorrhœal arthritis . . . . .	...	1	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...
Syphilitic arthritis . . . . .	...	5	...	1	1	2	...	1	...	...	...	...	...	1	1	1	...	2
Arthritis	4	2	...	...	1	2	2	...	...	1	...	...	1	1	3	...	1	...
Synovitis	4	4	1	...	1	3	3	...	...	...	...	...	1	2	1	2	1	1
Suppurative arthritis	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Charcot's knee	1	1	...	...	...	...	...	1	1	...	...	...	...	...	...	1	1	...
Hysterical	1	3	...	...	...	4	...	...	...	...	1	...	...	...	2	1	...	...
Osteo-arthritis	1	3	...	...	...	1	1	2	...	...	...	1	...	...	...	...	2	1
Ankylosis	9	3	1	1	4	2	2	2	...	...	...	...	...	3	1	1	6	1
Loose bodies	3	1	...	...	1	2	...	...	...	1	...	...	1	...	...	1	2	...
Dislocation of semilunar cartilage	1	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...
<i>Ankle—</i>																		
Tuberculous arthritis	3	4	...	3	2	...	1	...	1	...	...	...	...	1	1	2	2	1
Gonorrhœal arthritis . . . . .	...	3	...	...	...	2	...	1	...	...	...	...	...	2	...	...	...	1
Synovitis . . . . .	...	1	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...
Neurosis . . . . .	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...
<i>Sacro-iliac disease .</i>																		
Interphalangeal joint	1	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...
Metacarpo-phalangeal	1	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...
Adhesions in joints	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...
Gonorrhœal rheumatism	2	1	...	...	...	2	1	...	...	...	1	...	1	1	...	...	...	...
Adhesion of scapula to ribs . . . . .	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...
NERVOUS SYSTEM.																		
Neuritis	3	2	...	...	...	1	2	...	1	1	...	...	1	1	...	...	2	1
Traumatic neurasthenia	2	...	...	...	...	1	...	1	...	...	1	...	...	...	...	...	1	...
Painful stump	1	1	...	...	...	1	...	1	...	...	...	...	1	1	...	...	...	...
Spasmodic torticollis . . . . .	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...
Neurosis	1	4	...	...	1	3	1	...	...	...	...	...	...	2	1	...	2	...

according to authorised Nomenclature—continued.

Duration of residence.									Result.				Remarks.
Dys. 1-4	Dys. 5-13	Wks. 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Mts. +12	C.	R.	U.	D.	
...	1	...	1	...	...	...	...	...	...	2	...	...	Enlarged prostate. Readmission.
...	2	1	1	...	1	...	...	...	4	1	...	...
...	...	1	...	...	...	...	...	...	1	...	...	...
...	...	...	1	...	...	...	...	...	1	...	...	...
...	...	1	1	4	...	...	...	...	2	4	...	...	Readmission 1.
1	11	7	13	11	1	...	...	...	14	30	...	...	Readmissions 12.
...	...	...	...	1	...	...	...	...	...	1	...	...
...	...	1	2	2	...	...	...	...	...	5	...	...	Congenital 3, ankles affected 1.
...	1	3	2	...	...	...	...	...	1	5	...	...	Puerperal 1, ? cause 4.
1	2	3	1	1	...	...	...	...	5	3	...	...
...	...	...	...	1	...	...	...	...	1	...	...	...	Probably secondary to acute necrosis; arthro-
...	...	2	...	...	...	...	...	...	...	2	...	...	tomy.
...	3	1	...	...	...	...	...	...	3	1	...	...
...	3	...	...	1	...	...	...	...	...	4	...	...
...	3	4	5	...	...	...	...	...	4	8	...	...
...	...	3	1	...	...	...	...	...	3	...	1	...	Operation deferred 1.
...	...	1	...	...	...	...	...	...	...	1	...	...
...	...	2	4	1	...	...	...	...	3	3	...	1	Fatal: general tuberculosis.
...	...	1	1	1	...	...	...	...	2	1	...	...
...	1	...	...	...	...	...	...	...	1	...	...	...
...	...	...	...	1	...	...	...	...	...	1	...	...
...	...	2	...	1	1	...	...	1	...	5	...	...
...	...	1	...	...	...	...	...	...	1	...	...	...	Of hallux tuberculous.
...	...	1	...	...	...	...	...	...	1	...	...	...	Septic arthritis.
...	...	1	...	...	...	...	...	...	1	...	...	...
...	...	1	2	...	...	...	...	...	3	...	...	...
...	...	...	1	...	...	...	...	...	1	...	...	...	Previous tuberculous disease of scapula.
...	3	...	1	1	...	...	...	...	1	4	...	...
...	...	1	1	...	...	...	...	...	1	1	...	...
...	1	...	1	...	...	...	...	...	2	...	...	...	See "Fractures of humerus."
...	1	...	...	...	...	...	...	...	...	...	1	...	Transferred to Medical side.
...	2	3	...	...	...	...	...	...	1	3	1	...	

TABLE I.—*Abstract, showing Diseases, &c., in Classes,*

DISEASE.	Sex.		Age.								Duration before admission.							
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60	Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-6	Mts. 6-12	Chronic.	Not stated.
RESPIRATORY SYSTEM.																		
Empyema	2	1	...	...	1	2	...	...	...	...	...	...	...	3	...	...	...	...
Laryngitis, simple	2	1	...	...	1	...	...	1	1	...	...	1	...	2	...	...	...	...
„ tuberculous	2	1	...	...	...	...	1	2	...	...	...	...	...	1	1	...	1	...
Stenosis of larynx	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
Empyema of antrum	4	4	...	...	1	3	1	3	...	...	...	1	...	1	...	1	5	...
„ of frontal sinus . . . . .	...	1	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...
Sclerosis of frontal sinus	1	1	...	...	...	1	1	...	...	...	...	...	...	...	...	...	2	...
Inability to leave out tracheotomy tube . . . . .	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Rhinitis	2	12	...	...	5	9	...	...	...	...	1	...	...	1	3	...	7	2
AUDITORY SYSTEM.																		
Otitis externa . . . . .	...	1	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...
Meatal abscess	2	...	...	1	...	1	...	...	...	...	...	1	...	...	...	...	...	1
Acute otitis media	1	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...
Otitis media suppurativa	15	9	2	3	11	4	3	...	...	1	...	1	4	1	7	...	7	4
Do. and mastoid abscess	26	23	10	12	14	6	5	1	...	1	5	4	16	5	4	1	5	9
Do. do. and sinus throm- bosis	1	1	...	1	1	...	...	...	...	...	...	2	...	...	...	...	...	...
Do. do. and cerebellar ab- scess . . . . .	...	1	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...
Do. do. and cerebral ab- scess	2	2	1	...	...	1	2	...	...	...	...	...	1	1	1	1	...	...
Do. do. and meningitis	1	2	2	...	1	...	...	...	...	...	...	2	1	...	...	...	...	...
DISEASES OF SPINE.																		
Cervical caries	2	...	1	...	1	...	...	...	...	...	...	...	...	...	1	1	...	...
Dorsal caries	8	8	1	1	5	4	5	...	...	...	...	...	1	1	2	...	11	1
Lumbar caries	12	3	1	3	4	3	1	2	1	...	...	...	...	...	3	3	8	1
DISEASES OF BURSE, &c.																		
Acute bursitis	10	13	2	1	6	5	3	2	2	2	4	12	2	...	...	...	...	5
Chronic bursitis	6	13	...	1	4	10	2	1	...	1	...	1	2	2	5	4	5	...
Simple ganglion	4	3	...	...	1	2	4	...	...	...	...	...	...	1	...	3	3	...
Compound ganglion	1	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...

according to authorised Nomenclature—continued.

Duration of residence.										Result.				Remarks.
Dys. 1-4	Dys. 5-13	Wks. 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Mts. +12		C.	R.	U.	D.	
...	...	1	...	1	1	...	...	...	1	2	...	...	...	? Abscess of lung 1.
...	2	1	...	...	...	...	...	...	2	1	...	...	...	Right abductor paralysis 1; ? cause.
1	1	1	...	...	...	...	...	...	...	2	...	...	1	
...	1	...	...	...	...	...	...	...	...	...	...	...	1	Thyrotomy; syphilitic.
...	3	2	3	...	...	...	...	...	3	5	...	...	...	Double 1.
...	...	...	1	...	...	...	...	...	...	1	...	...	...
...	...	...	2	...	...	...	...	...	...	2	...	...	...	Sinus 1; previous empyema of antrum.
...	...	...	...	...	...	1	...	...	...	1	...	...	...
3	8	3	...	...	...	...	...	...	6	7	1	...	...	Hypertrophic 9, atrophic 1, ulcerative 1, adenoids 1.
...	1	...	...	...	...	...	...	...	1	...	...	...	...
1	1	...	...	...	...	...	...	...	2	...	...	...	...
1	...	...	...	...	...	...	...	...	1	...	...	...	...
3	14	7	...	...	...	...	...	...	4	20	...	...	...	Readmissions 2.
1	24	16	6	2	...	...	...	...	11	35	...	...	3	
...	1	1	...	...	...	...	...	...	...	...	...	...	2	
...	1	...	...	...	...	...	...	...	...	...	...	...	1	
...	1	1	1	1	...	...	...	...	...	...	...	...	4	
1	2	...	...	...	...	...	...	...	...	...	1	2	...	"At own request" 1.
...	1	...	...	...	...	1	...	...	...	2	...	...	...
...	2	6	7	1	...	...	...	...	...	14	2	...	...	Psoas abscess 6; caries of tarsus 1, of femur 1; paraplegia 2; tuberculous epididymitis 1.
1	...	4	5	4	1	...	...	...	...	14	1	...	...	Psoas abscess 9, lumbar 3, iliac 1, dorso-lumbar 3; caries of ilium 1; tuberculous testicle 1; lardaceous disease 1; readmissions 2.
1	14	5	3	...	...	...	...	...	21	...	1	1	...	Bursa patellæ 21, olecranon 1, bunion 1. Fatal: erysipelas. <i>Vide</i> Special Table II.
...	11	5	3	...	...	...	...	...	17	2	...	...	...	Semimembranosus 4, patellar 11, subdeltoid 1, psoas 1, olecranon 1, biceps 1.
1	4	2	...	...	...	...	...	...	7	...	...	...	...
...	1	...	...	...	...	...	...	...	1	...	...	...	...

TABLE I.—*Abstract, showing Diseases, &c., in Classes*

DISEASE.	Sex.		Age.								Duration before admission.							
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60	Dys. 1-4	Dys. 5-13	Wks 2-4	M.s. 1-2	Mts. 2-6	Mts. 6-12	Chronic.	Not stated.
DISEASES OF BURSÆ, &C.—																		
<i>continued.</i>																		
Teno-synovitis, tuberculous	4	3	...	2	2	..	...	1	1	1	1	...	1	1	2	1	1	...
Myositis ossificans .	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...
DISEASES OF SKIN AND CONNECTIVE TISSUE.																		
<i>Acute abscess .</i>	98	61	26	18	26	39	27	12	8	3	15	48	37	18	11	2	2	26
<i>Tuberculous abscess—</i>																		
Back	1	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...
Neck	4	4	1	1	3	3	...	...	...	...	...	...	1	1	3	1	1	1
Breast . . . . .	...	2	...	...	...	...	1	1	...	...	...	...	...	...	1	...	1	...
Buttock	1	1	...	1	1	...	...	...	...	...	...	...	1	...	...	...	1	...
Thigh	4	3	...	2	4	...	1	...	...	...	...	...	1	3	1	...	...	2
Knee	3	...	1	2	...	...	...	...	...	...	...	...	...	...	...	...	3	...
Leg	2	...	...	1	1	...	...	...	...	...	...	...	...	...	1	...	1	...
Ankle . . . . .	...	1	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...
Foot . . . . .	...	1	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...
Hand . . . . .	...	1	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...
Forearm . . . . .	...	2	...	...	...	2	...	...	...	...	...	...	1	1	...	...	...	...
Arm	6	...	2	3	1	...	...	...	...	...	...	...	...	3	3	...	...	...
Chest . . . . .	...	2	...	1	...	1	...	...	...	...	...	1	...	1	...	...	...	...
<i>Special abscess—</i>																		
Retro-pharyngeal .	4	...	4	...	...	...	...	...	...	...	...	1	...	1	2	...	...	...
Retro-peritoneal .	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1
Psoas	1	1	1	1	...	...	...	...	...	...	...	...	1	...	1	...	...	...
Iliac abscess . .	1	1	...	...	1	...	...	...	...	1	...	2	...	...	...	...	...	...
Pelvic abscess .	...	3	...	...	...	3	...	...	...	...	...	2	...	...	1	...	...	...
Hepatic abscess .	1	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...
Submammary . .	...	1	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...
Perinæal	2	...	...	...	...	...	1	1	...	...	...	1	1	...	...	...	...	...
Peri-urethral . .	4	...	...	...	1	...	2	...	...	1	...	1	2	...	1	...	...	...
<i>Ulcer—</i>																		
Simple	9	13	5	...	3	2	2	5	1	4	1	1	2	5	1	...	4	8
Varicose	2	2	...	...	...	1	...	3	...	...	...	...	...	1	1	...	1	1
Perforating . . .	5	1	...	...	...	...	2	2	1	1	...	...	...	1	...	...	3	2
Syphilitic	4	3	...	...	...	4	1	2	...	...	...	...	1	...	...	1	4	1
Sloughing . . . .	...	2	...	...	1	...	...	1	...	...	...	...	1	...	...	...	1	...

according to authorised Nomenclature—continued.

Duration of residence.										Result.				Remarks.
Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Mts. +12		C.	R.	U.	D.	
...	3	3	1	...	...	...	...	...	6	1	...	...	...	Wrist 4, ankle 3. Readmission 1.
...	...	...	1	...	...	...	...	...	1	...	...	...	...
9	80	51	14	5	...	...	...	...	154	4	...	1	...	Fatal case: septic meningitis. Amputation of thigh 1; erysipelas 1.
...	...	1	...	...	...	...	...	...	...	...	...	...	...
1	5	2	...	...	...	...	...	...	8	...	...	...	...
...	...	2	...	...	...	...	...	...	2	...	...	...	...
...	...	1	1	...	...	...	...	...	2	...	...	...	...
...	3	4	...	...	...	...	...	...	5	1	1	...	...	Chicken-pox 1.
...	1	1	1	...	...	...	...	...	1	2	...	...	...	Readmission 1.
...	...	1	1	...	...	...	...	...	1	1	...	...	...
...	...	1	...	...	...	...	...	...	1	...	...	...	...
...	...	...	1	...	...	...	...	...	1	...	...	...	...
...	1	...	...	...	...	...	...	...	1	...	...	...	...
...	1	1	...	...	...	...	...	...	2	...	...	...	...	Readmission 1.
1	2	3	...	...	...	...	...	...	6	...	...	...	...
...	2	...	...	...	...	...	...	...	2	...	...	...	...	Residual 1.
1	1	1	1	...	...	...	...	...	1	1	...	2	...	Erysipelas 1. Readmission 1. Fatal: hæmorrhage 1.
...	...	...	1	...	...	...	...	...	1	...	...	...	...
...	...	...	2	...	...	...	...	...	1	1	...	...	...	Subsided 1.
...	...	1	1	...	...	...	...	...	1	1	...	...	...	? Appendix 1.
...	1	1	...	1	...	...	...	...	2	1	...	...	...	Readmission 1.
...	...	1	...	...	...	...	...	...	1	...	...	...	...
...	...	1	...	...	...	...	...	...	1	...	...	...	...
...	2	...	...	...	...	...	...	...	2	...	...	...	...
...	1	1	...	1	1	...	...	...	2	1	...	1	...	Fatal: pyæmia. <i>Vide</i> Special Table III.
2	5	8	7	...	...	...	...	...	17	2	...	3	...	Fatal cases: of umbilicus 2, of leg 1.
...	1	2	1	...	...	...	...	...	4	...	...	...	...
1	2	2	...	1	...	...	...	...	1	5	...	...	...	Glycosuria and amputation 1. Readmission 1.
...	...	3	4	...	...	...	...	...	5	2	...	...	...
...	...	1	...	...	...	1	...	...	1	1	...	...	...	Suppurative arthritis of knee 1.

according to authorised Nomenclature—continued.

Duration of residence.									Result.				Remarks.
Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Mts. +12	C.	R.	U.	D.	
2	5	10	9	3	...	...	...	...	12	15	2	...	
3	18	13	9	3	...	...	...	...	42	2	...	2	Fatal: fatty heart, nephritis.
1	1	1	...	...	...	...	...	...	2	...	...	1	
2	4	...	...	...	...	...	...	...	5	...	...	1	Fatal: pyæmia. <i>Vide</i> Special Table III.
...	...	3	1	...	...	...	...	...	3	1	...	...	Neck 1.
...	...	1	...	...	...	...	...	...	...	...	...	1	Broncho-pneumonia.
...	...	3	...	...	...	...	...	...	3	...	...	...
...	...	1	...	...	...	...	...	...	1	...	...	...
4	10	18	8	3	1	1	...	...	8	33	4	...	Erysipelas 2. <i>Vide</i> Special Table II.
...	...	...	...	1	...	...	...	...	...	1	...	...	Erysipelas 1. <i>Vide</i> Special Table II.
1	...	...	...	...	...	...	...	...	1	...	...	...
1	1	1	...	...	...	...	...	...	3	...	...	...
1	...	...	...	...	...	...	...	...	1	...	...	...
1	...	...	...	...	...	...	...	...	1	...	...	...
...	1	...	...	...	...	...	...	...	1	...	...	...
3	6	...	...	...	...	...	...	...	8	...	...	1	Fatal: diabetic coma.
...	1	3	5	3	...	...	1	...	5	7	1	...	Paralytic 1, nævus 1, double 6.
...	5	2	1	..	...	...	...	...	5	3	...	...	Paralytic 7, pes cavus 1.
...	1	3	9	5	...	...	...	...	11	6	1	...	And varum 1 after epiphysitis.
...	...	...	...	1	...	...	...	...	1	...	...	...	Double.
1	2	2	2	...	...	...	...	...	5	1	1	...	Whooping-cough 1.
2	7	3	2	2	...	...	...	...	11	2	3	...	Lip 1, ectropion 3, face 2, fingers 8, nares 2.
...	6	2	...	...	...	...	...	...	6	2	...	...
...	...	1	1	...	...	...	...	...	1	1	...	...
...	18	9	...	...	...	...	...	...	27	...	...	...
...	1	4	...	...	...	...	...	...	5	...	...	...
1	8	2	2	...	...	...	...	...	11	2	...	...
1	3	2	3	1	...	...	...	...	4	4	2	...	"At own request" 1.
1	5	...	...	...	...	...	...	...	4	2	...	...	Hypertrophic rhinitis 1.
...	1	2	...	...	...	...	...	...	2	1	...	...	Readmission 1; humerus 3.
...	1	...	...	...	...	...	...	...	...	1	...	...
...	...	...	1	...	...	...	...	...	...	1	...	...
...	1	...	...	...	...	...	...	...	...	1	...	...
...	...	1	...	...	...	...	...	...	1	...	...	...	Previous frontal sinus empyema.
...	...	...	...	...	...	1	...	...	...	1	...	...

TABLE I.—*Abstract, showing Diseases, &c., in Classes,*

DISEASE.	Sex.		Age.								Duration before admission.							
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60	Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-6	Mts. 6-12	Chronic	Not stated.
DEFORMITIES—<i>continued.</i>																		
Ruptured perinæum	2	...	...	...	1	1	...	...	...	...	...	...	...	...	1	1	...	...
Lateral curvature	4	...	...	...	4	...	...	...	...	...	...	...	1	...	...	...	3	...
Hyper-extension of toes . . .	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...
MALFORMATIONS.																		
Single harelip	2	2	3	...	1	...	...	...	...	...	...	...	...	1	1	...	2	...
Double harelip	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Single harelip and cleft palate	5	3	7	...	...	...	1	...	...	...	...	1	2	1	2	1	1	...
Double harelip and cleft palate	3	...	3	...	...	...	...	...	...	...	...	1	...	...	1	...	1	...
Cleft palate	7	7	7	1	5	1	...	...	...	...	...	...	...	...	...	...	14	...
Microcephalus	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Meningocele . . . .	...	1	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
Congenital fistula of neck	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...
Congenital dislocation of hip	1	1	...	1	1	...	...	...	...	...	...	...	...	...	...	...	2	...
Congenital flat foot	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Supernumerary toe	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...
Spina bifida	5	2	7	...	...	...	...	...	...	...	5	...	...	...	1	1	...	...
Hypospadias	3	...	1	1	1	...	...	...	...	...	...	...	...	...	...	...	3	...
Epispadias	3	...	...	1	2	...	...	...	...	...	...	...	...	...	...	...	3	...
Exomphalos . . . .	...	1	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
Imperforate rectum	1	1	2	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...
Multiple strictures of small gut	1	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
MEDICAL.																		
Dyspepsia	2	1	...	...	...	2	...	1	...	...	...	...	...	1	1	...	...	1
Constipation	1	2	...	...	...	1	...	2	...	...	2	...	1	...	...	...	...	...
Diarrhœa	1	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...
Dilated stomach	1	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...
Tonsillitis	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
Dysentery	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...
Cirrhosis of liver	1	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...
Abdominal pain	2	...	...	...	1	1	...	...	...	...	...	1	...	...	...	...	...	1
Lumbago	4	...	...	...	...	1	2	1	...	...	...	...	...	...	3	...	1	...
Scarlet fever	1	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...
Malignant endocarditis . . .	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
Chronic renal	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
Uræmia . . . .	...	1	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...
Œdema . . . .	...	2	...	...	...	1	...	1	...	...	...	...	...	1	...	...	1	...

according to authorised Nomenclature—continued.

Duration of residence.										Result.				Remarks.
Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Mts. +12		C.	R.	U.	D.	
...	1	1	...	...	...	...	...	...		2	...	...	...
...	2	1	1	...	...	...	...	...	...	4	...	...	...
...	1	...	...	...	...	...	...	...	...	1	...	...	...
1	2	1	...	...	...	...	...	...	...	3	...	...	1	Left 2. Fatal: marasmus.
...	1	...	...	...	...	...	...	...	...	1	...	...	...	Previous suture.
...	5	1	1	1	...	...	...	...	...	5	1	2		Fatal: collapsed lung.
...	2	1	...	...	...	...	...	...	...	2	1	...		
1	2	6	3	1	1	...	...	...	...	5	4	5	...	Diphtheria 2, varicella 1.
...	1	...	...	...	...	...	...	...	...	...	...	1	...	
...	...	1	...	...	...	...	...	...	...	1	...	...	...
...	...	1	...	...	...	...	...	...	...	...	1	...	...	Median.
...	2	...	...	...	...	...	...	...	...	...	2	...	...	Double 1.
...	...	...	...	...	...	1	...	...	...	1	...	...	...	Contracted thumbs; hernia.
1	...	...	...	...	...	...	...	...	...	1	...	...	...
2	4	...	1	...	...	...	...	...	...	3	...	4	...	
...	...	1	2	...	...	...	...	...	...	3	...	...	...
...	...	...	...	2	...	...	1	...	...	3	...	...	...
...	1	...	...	...	...	...	...	...	...	...	...	1	...	
2	...	...	...	...	...	...	...	...	...	...	...	2	...	
1	...	...	...	...	...	...	...	...	...	...	...	1	...	Five strictures; first 12 inches from duodenum.
2	1	...	...	...	...	...	...	...	...	1	1	1	...	
1	2	...	...	...	...	...	...	...	...	3	...	...	...
...	...	1	...	...	...	...	...	...	...	1	...	...	...
...	1	...	...	...	...	...	...	...	...	...	1	...	...	To Medical side.
...	1	...	...	...	...	...	...	...	...	1	...	...	...
...	1	...	...	...	...	...	...	...	...	...	1	...	...	To Medical side.
...	1	...	...	...	...	...	...	...	...	1	...	...	...
2	...	...	...	...	...	...	...	...	...	2	...	...	...
...	2	...	1	1	...	...	...	...	...	1	3	...	...	Sciatica 1.
1	...	...	...	...	...	...	...	...	...	...	1	...	...	To Medical side. Cellulitis of neck.
1	...	...	...	...	...	...	...	...	...	...	...	1	...	Gluteal abscess.
1	...	...	...	...	...	...	...	...	...	...	...	1	...	
1	...	...	...	...	...	...	...	...	...	...	...	1	...	
...	1	1	...	...	...	...	...	...	...	2	...	...	...	Legs 1, thigh 1; cardiac 1.

according to authorised Nomenclature—continued.

Duration of residence.									Result.				Remarks.
Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Mts. +12	C.	R.	U.	D.	
...	...	...	1	...	...	...	...	...	...	1	...	...
1	...	...	...	...	...	...	...	...	...	...	1	...	Perforating ulcer.
1	...	...	...	...	...	...	...	...	...	...	1	...	To Medical side.
2	...	...	...	...	...	...	...	...	...	...	2	...	
...	1	...	...	...	...	...	...	...	...	...	1	...	To Medical side.
...	1	...	...	...	...	...	...	...	...	...	1	...	To Medical side.
...	1	...	...	...	...	...	...	...	...	...	1	...	To Medical side.
1	...	...	...	...	...	...	...	...	...	...	1	...	To Medical side.
...	...	1	...	...	...	...	...	...	1	...	...	...
...	1	...	...	...	...	...	...	...	...	1	...	...
1	1	1	...	...	...	...	...	...	3	...	...	...
1	...	...	...	...	...	...	...	...	...	...	1	...	To Medical side.
...	2	2	...	...	...	...	...	...	...	4	...	...	Same case.
...	1	1	...	...	...	...	...	...	1	...	1	...	Cause? "At own request" 1.
1	1	...	...	...	...	...	...	...	1	...	1	...	
29	13	6	...	...	...	...	...	...	37	8	3	...	
...	...	...	3	...	...	...	...	...	2	1	...	...
									1834	776	156	149	

TABLE II.—*Abstract, showing Injuries, &c., in*

INJURIES.	Sex.		Age.								Duration before admission.					
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60	Hrs. 1-6	Hrs. 7-12	Hrs. 13-24	Dys. 1-3	Dys. 3-6	Dys. +6
GENERAL INJURIES.																
Burns	20	29	21	6	7	3	5	2	3	2	45	...	...	2	...	2
Scalds	21	12	23	6	1	2	...	1	...	...	25	...	...	4	3	1
LOCAL INJURIES.																
Wounds and contusions of scalp	5	5	2	...	1	3	1	...	...	3	7	...	...	1	1	1
Wounds of face	1	3	1	...	1	...	2	...	...	...	3	...	...	...	...	1
Wound of palate	1	...	1	...	...	...	...	...	...	...	...	...	...	1	...	..
Wounds of mouth	1	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...
Concussion	57	17	14	13	11	7	8	11	4	6	71	1	...	1	...	1
<i>Fractures of vault of skull—</i>																
Compound	1	1	...	...	1	...	...	...	1	...	1	...	...	...	1	...
Simple depressed	2	1	2	...	...	1	...	...	...	...	1	...	...	1	...	1
Compound depressed	5	...	...	1	1	2	...	...	1	...	5	...	...	...	...	...
<i>Fractures of base—</i>																
Simple	18	4	1	2	8	2	4	3	2	...	21	...	...	...	...	1
<i>Fractures of base and vertex</i>																
Simple	3	1	1	...	1	1	...	1	...	...	4	...	...	...	...	...
Compound depressed	3	1	1	...	...	...	1	...	1	1	4	...	...	...	...	...
<i>Fractures of face bones—</i>																
Nasal bones	1	1	...	...	1	...	1	...	...	...	1	...	...	...	1	...
Malar	1	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...
Inferior maxilla	4	...	...	...	2	...	...	2	...	...	2	...	...	2	...	...
<i>Injuries of neck—</i>																
Cut throat	8	1	...	...	...	3	2	1	2	1	9	...	...	...	...	...
Wound of pharynx	1	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...
<i>Injuries of thorax—</i>																
Contusions	1	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...
Penetrating wounds of chest	4	...	...	...	2	1	...	1	...	...	4	...	...	...	...	...
Needle in chest wall	1	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...
Bullet in lung	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
Fractured ribs	14	4	...	2	2	1	5	1	2	5	17	...	...	...	...	1
Fractured sternum	1	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...
<i>Injuries of spine—</i>																
Sprains and contusions	11	2	...	...	3	2	2	3	3	...	10	...	...	...	1	2

Classes, according to authorised Nomenclature.

Duration of residence.									Result.				Remarks.
Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Mts. +12	C.	R.	U.	D.	
12	12	13	9	2	1	...	...	...	31	...	...	18	Erysipelas 1. <i>Vide</i> Special Table II.
8	10	7	7	1	...	...	...	...	26	...	...	7	
2	4	3	1	...	...	...	...	...	10	...	...	...	Concussion 1.
3	1	...	...	...	...	...	...	...	3	1	...	...	Of Stenson's duct 1.
...	1	...	...	...	...	...	...	...	1	...	...	...
...	...	...	...	...	...	...	...	...	1	...	...	...
28	36	8	2	...	...	...	...	...	68	1	...	5	Laceration of brain 2; fractured ribs 2; clavicle 1; jaw 1; radius and ulna 2.
...	2	...	...	...	...	...	...	...	2	...	...	...
1	1	1	...	...	...	...	...	...	2	...	1	...	Traumatic epilepsy 1. "At own request."
...	1	2	2	...	...	...	...	...	5	...	...	...	Gunshot wound 2. Same case.
3	11	4	4	...	...	...	...	...	17	1	1	3	To Medical side 1.
3	1	...	...	...	...	...	...	...	...	...	...	4	
4	...	...	...	...	...	...	...	...	...	...	...	4	Fractured ribs 2.
...	1	1	...	...	...	...	...	...	2	...	...	...	Hæmorrhage 2; fractured metacarpal 1.
...	1	...	...	...	...	...	...	...	1	...	...	...
2	2	...	...	...	...	...	...	...	4	...	...	...	Fracture of hyoid 1.
1	6	2	...	...	...	...	...	...	7	...	...	2	
1	...	...	...	...	...	...	...	...	1	...	...	...
...	...	1	...	...	...	...	...	...	1	...	...	...
1	2	1	...	...	...	...	...	...	4	...	...	...
1	...	...	...	...	...	...	...	...	...	...	1	...	Skiagram negative.
...	1	...	...	...	...	...	...	...	...	...	1	...	
8	5	4	1	...	...	...	...	...	13	...	1	4	Wound of lung 6; contusion of kidney 1; fractured clavicle 1. See also "Ruptured liver."
...	...	1	...	...	...	...	...	...	1	...	...	...	Crushed beneath archway.
3	6	1	2	1	...	...	...	...	11	1	...	1	Cystitis 1; cerebral irritation 1. Fatal case: fatty liver and heart.

TABLE II.—*Abstract, showing Injuries, &c., in*

INJURIES.	Sex.		Age.								Duration before admission.					
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60	Hrs. 1-6	Hrs. 7-12	Hrs. 13-24	Dys. 1-3	Dys. 3-6	Dys. +6
LOCAL INJURIES—continued.																
<i>Injuries of spine—continued.</i>																
Gunshot wound of back . . .	...	1	...	...	...	1	...	...	...	...	1	...	...	...	...	...
Fracture of spine . . .	5	...	...	...	...	...	1	2	2	...	2	...	...	2	...	1
Dislocation of spine . . .	1	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...
<i>Injuries of abdomen—</i>																
Contusions . . .	16	...	2	2	5	3	3	1	...	...	16	...	...	...	...	...
Wounds of wall . . .	2	...	...	...	1	...	...	...	1	...	2	...	...	...	...	...
Needle in wall . . .	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
Ruptured kidney . . .	4	...	...	1	3	...	...	...	...	...	4	...	...	...	...	...
Rupture of liver . . .	3	...	...	...	...	2	1	...	...	...	3	...	...	...	...	...
Rupture of spleen . . .	2	...	...	...	2	...	...	...	...	...	2	...	...	...	...	...
Ruptured small gut . . .	3	...	...	...	1	...	...	1	1	...	2	...	...	1	...	...
Foreign body in stomach . . .	1	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...
Wound of rectum . . .	...	1	...	1	...	...	...	...	...	...	1	...	...	...	...	...
Ruptured bladder . . .	1	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...
<i>Injuries of external genitalia—</i>																
Contusion of testicle . . .	1	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...
Hæmatoma of labium . . .	...	1	...	...	...	...	...	1	...	...	1	...	...	...	...	...
Laceration of vagina and labium . . .	...	1	...	...	...	...	1	...	...	...	1	...	...	...	...	...
<i>Injuries of pelvis—</i>																
Wound of perinæum . . .	2	...	...	...	1	1	...	...	...	...	2	...	...	...	...	...
Contusion of pelvis . . .	1	1	...	1	...	...	...	...	1	...	2	...	...	...	...	...
Fractured pelvis . . .	6	...	...	1	1	...	1	1	1	1	6	...	...	...	...	...
<i>Injuries of upper extremity—</i>																
Contusions . . .	...	3	...	1	1	...	...	...	...	1	3	...	...	...	...	...
Avulsion of arm . . .	2	...	...	...	1	...	...	1	...	...	2	...	...	...	...	...
Wounds of forearm and hand . . .	31	9	1	2	12	15	2	2	3	3	34	...	...	...	2	4
Foreign body . . .	5	8	...	...	3	7	2	1	...	...	2	...	...	1	1	9
Divided median nerve . . .	2	...	...	...	...	1	...	1	...	...	2	...	...	...	...	...
„ ulnar nerve . . .	3	1	...	...	1	1	1	1	...	...	2	...	...	...	...	2
„ posterior inter-osseous . . .	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	1
Injury to brachial plexus . . .	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
Dislocation of humerus . . .	1	2	...	...	...	...	1	1	...	1	...	...	...	...	...	3
„ of radius and ulna . . .	3	...	...	...	2	1	...	...	...	...	2	...	...	...	...	1
„ of fingers . . .	2	...	...	...	...	...	...	1	1	...	...	...	...	...	...	2

Classes, according to authorised Nomenclature—continued.

Duration of residence.									Result.				Remarks.
Dys. 1-4	Dys 5-13	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Mts. +12	C.	R.	U.	D.	
...	...	1	...	...	...	...	...	...	1	...	...	...
1	1	...	2	...	...	1	...	...	1	2	...	2	
1	...	...	...	...	...	...	...	...	...	...	...	1	Pure dislocation 5-6 cervical.
11	3	1	1	...	...	...	...	...	16	...	...	...	? Ruptured mesentery 1; cœliotomy 1.
1	...	1	...	...	...	...	...	...	2	...	...	...
1	...	...	...	...	...	...	...	...	1	...	...	...	See "Injuries of thorax." Readmission.
...	4	...	...	...	...	...	...	...	4	...	...	...
3	...	...	...	...	...	...	...	...	...	...	...	3	Ruptured spleen, mesentery, and bladder in 1; ruptured kidney 1.
1	...	...	1	...	...	...	...	...	1	...	...	1	Contusion of kidney 1; Colles's fracture 1; wound of lung 1.
3	...	...	...	...	...	...	...	...	...	...	...	3	
1	...	...	...	...	...	...	...	...	...	...	...	1	
...	...	...	1	...	...	...	...	...	1	...	...	...
1	...	...	...	...	...	...	...	...	...	...	...	1	Fractured pelvis, radius, and ulna.
...	1	...	...	...	...	...	...	...	1	...	...	...
...	...	1	...	...	...	...	...	...	1	...	...	...
1	...	...	...	...	...	...	...	...	1	...	...	...
...	1	1	...	...	...	...	...	...	2	...	...	...
1	1	...	...	...	...	...	...	...	2	...	...	...	Concussion 1.
1	1	1	3	...	...	...	...	...	5	...	...	1	Compound 2; fractured ribs 2; Colles's fracture 1.
...	3	...	...	...	...	...	...	...	3	...	...	...
1	...	1	...	...	...	...	...	...	1	...	...	1	See under conical stump.
11	14	6	9	...	...	...	...	...	37	3	...	...	Radial traumatic aneurysm 1.
6	6	1	...	...	...	...	...	...	12	1	...	...
...	1	1	...	...	...	...	...	...	1	...	1	...	"At own request" 1.
...	1	2	1	...	...	...	...	...	1	2	1	...	Old case 2; suture failed 1; immediate suture 2.
...	...	...	1	...	...	...	...	...	1	...	...	...
...	...	...	...	1	...	...	...	...	1	...	...	...	Previous fractured clavicle and ribs.
1	1	...	1	...	...	...	...	...	2	1	...	...	Old cases 3.
1	...	2	...	...	...	...	...	...	2	1	...	...
1	...	1	...	...	...	...	...	...	1	...	1	...	Thumb 1.

TABLE II.—*Abstract, showing Injuries, &c., in*

INJURIES.	Sex.		Age.								Duration before admission.					
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60	Hrs. 1-6	Hrs. 7-12	Hrs. 13- 24	Dys. 1-3	Dys. 3-6	Dys. +6
<i>LOCAL INJURIES—continued.</i>																
<i>Injuries of upper extremity—continued.</i>																
Fractures—																
Clavicle	1	1	...	...	...	1	...	...	1	...	2	...	...	...	...	...
Humerus	5	2	...	...	1	1	1	2	...	2	6	...	...	1	...	...
Do., comminuted . . .	1	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...
Do., comp. comminuted .	2	1	...	...	...	1	...	1	1	...	3	...	...	...	...	...
Fracture dislocation of humerus	1	1	...	...	1	...	...	...	...	1	1	...	...	...	...	1
Fractured olecranon . .	4	1	...	...	1	1	2	...	...	1	...	...	...	...	1	4
„ radius and ulna . .	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
„ „ compound . . .	1	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...
„ „ comp. com- minuted	1	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...
Punctured wound of elbow-joint	1	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...
<i>Injuries of lower extremity—</i>																
Contusions	11	2	...	1	2	4	3	1	1	1	11	...	...	...	...	2
Wounds of thigh . . .	3	1	...	2	...	...	1	1	...	...	3	...	...	1	...	...
„ of leg	4	1	1	1	1	1	...	1	...	...	5	...	...	...	...	...
„ of foot	2	...	...	...	1	1	...	...	...	...	2	...	...	...	...	...
Foreign body	4	5	2	...	4	3	...	...	...	...	1	...	...	2	...	6
Traumatic synovitis—																
Knee	6	...	...	...	2	2	...	2	...	...	2	...	...	...	...	4
Ankle	1	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...
Penetrating wound of knee	2	...	...	...	...	1	1	...	...	...	1	...	...	...	...	1
Dislocations of—																
Hip	1	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...
Ankle . . . . .	...	1	...	...	...	1	...	...	...	...	1	...	...	...	...	...
„ compound	1	1	...	...	...	...	...	1	1	...	2	...	...	...	...	...
Subastragaloid, comp.	1	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...
Astragalus, compound	1	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...
Fractures—																
Shaft of femur	59	22	28	21	16	3	5	3	1	4	81	...	...	...	...	...
T-shaped	1	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...
Femur, compound . . .	1	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...
Do., comminuted . . .	1	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...
Do., comp. comminuted	2	...	...	...	1	...	...	...	...	1	2	...	...	...	...	...

Classes, according to authorised Nomenclature—continued.

Duration of residence.										Result.				Remarks.
Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Mts. +12		C.	R.	U.	D.	
1	...	...	1	...	...	...	...	...	2	...	...	...	...	Double 1. Scalp wound and concussion 1.
2	4	...	...	...	1	...	...	...	6	...	...	...	1	Compound fracture of radius and ulna with divided ulnar nerve 1; fractured rib 1; scalp wound 1. Fatal case: broncho-pneumonia; fatty liver and heart.
...	1	...	...	...	...	...	...	...	...	1	...	...	...
...	1	1	1	...	...	...	...	...	2	1	...	...	...	Elbow-joint involved 2, crushed hand 1.
1	1	...	...	...	...	...	...	...	...	1	1	...	...
1	1	2	1	...	...	...	...	...	5	...	...	...	...	Wired 3.
...	1	...	...	...	...	...	...	...	1	...	...	...	...
1	...	...	...	...	...	...	...	...	1	...	...	...	...
...	...	1	...	...	...	...	...	...	1	...	...	...	...	Amputation of arm.
...	1	...	...	...	...	...	...	...	1	...	...	...	...	Previous fractured olecranon; wound through fibrous union.
4	5	3	1	...	...	...	...	...	13	...	...	...	...	Laceration of vagina 1.
1	1	1	1	...	...	...	...	...	3	...	...	...	1	Fatal case: shock.
...	3	1	1	...	...	...	...	...	5	...	...	...	...
...	...	1	1	...	...	...	...	...	1	1	...	...	...	See later under necrosis 1.
1	2	4	2	...	...	...	...	...	6	1	2	...	...	Readmission 1; bullet 2, same case.
...	4	2	...	...	...	...	...	...	5	1	...	...	...	Ruptured internal lateral ligament 1.
...	1	...	...	...	...	...	...	...	1	...	...	...	...
...	...	1	1	...	...	...	...	...	1	1	...	...	...	Septic arthritis 1.
1	...	...	...	...	...	...	...	...	...	...	...	...	1	Railway smash.
...	1	...	...	...	...	...	...	...	1	...	...	...	...	Fractured fibula, backwards and inwards.
...	1	...	...	1	...	...	...	...	1	...	...	...	1	Fatal tetanus. <i>Vide</i> Special Table III.
...	...	...	1	...	...	...	...	...	...	...	...	...	1	Pyæmia. <i>Vide</i> Special Table III.
...	...	1	...	...	...	...	...	...	...	...	...	...	1	
4	24	25	24	4	...	...	...	...	81	...	...	...	...	Refracture 1; fractured humerus 1; dislocation of knee 1; ulcer of leg 2; with ankylosis of knee 1.
...	...	...	1	...	...	...	...	...	1	...	...	...	...	Dislocation of patella.
...	...	...	...	...	1	...	...	...	1	...	...	...	...	Delayed union.
1	...	...	...	...	...	...	...	...	...	...	...	...	1	Ruptured popliteal artery.
2	...	...	...	...	...	...	...	...	...	...	...	...	2	Spreading traumatic gangrene 1; double 1, with fractured ribs, sternum, and calvarium.

Classes, according to authorised Nomenclature—continued.

Duration of residence.									Result.				Remarks.
Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Mts. +12	C.	R.	U.	D.	
...	2	2	5	2	...	...	...	...	3	7	1	...	Ovarian cyst 1.
1	8	10	15	6	1	...	...	...	35	6	...	...	Refracture 2; comminuted 3.
22	43	13	1	...	...	...	...	...	78	...	...	1	Fatal case: ruptured popliteal artery and vein.
1	2	2	...	...	...	...	...	...	5	...	...	...	Amputation 1; secondarily compound.
1	6	8	...	2	...	...	...	...	16	...	...	1	Fatal case: crushed feet; amputation.
2	1	3	2	4	...	1	...	...	10	1	...	2	Fractured ribs 2.
6	9	6	1	...	...	...	...	...	22	...	...	...	Separation of upper epiphysis 1.
...	...	2	2	...	...	...	...	...	4	...	...	...	Wound of knee-joint 1.
5	12	2	...	...	...	...	...	...	18	...	...	1	Fatal. Delirium tremens. Cirrhotic liver.
...	1	...	...	...	...	...	...	...	1	...	...	...
...	...	1	...	...	...	...	...	...	1	...	...	...	Compound.
...	...	...	...	1	...	...	...	...	1	...	...	...	Amputation. See Fractures of humerus.
...	...	...	1	...	2	...	...	...	1	2	...	...	Screwed 1; delayed union 1.
...	...	...	1	2	...	...	...	...	1	2	...	...	Readmission 1; wired 1; previous compound fracture 2.
...	2	...	...	...	...	...	...	...	...	...	2	...	Separation of epiphysis (upper) 1.
...	1	1	...	...	...	...	...	...	2	...	...	...	Osteotomy 1; wrenching 1.
1	1	...	2	...	1	...	...	...	2	2	1	...	At own request 1; osteotomy 1; wrenching 2.
...	...	1	2	...	...	...	...	...	1	...	2	...	At own request 1; readmission 1.
...	...	...	1	...	...	...	...	...	1	...	...	...	Compound fracture.
									653	41	17	76	
									1834	776	156	149	
									2487	817	173	225	
									3702				

TABLE III.—

SURGICAL OPERATIONS.	Sex.		Age.							
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60
REMOVAL OF TUMOURS AND NEW GROWTHS.										
Amputation of breast . . . . .	...	6	...	...	...	...	2	...	2	2
„ „ and clearance of axilla . . . . .	...	37	...	...	...	...	3	15	11	8
Axillary glands . . . . .	...	3	...	...	...	...	...	3	...	...
Supra-clavicular glands . . . . .	...	2	...	...	...	...	...	...	...	2
Recurrent scirrhus of breast . . . . .	...	7	...	...	...	...	...	3	1	3
Carcinoma of antrum	2	...	...	...	...	...	...	1	1	...
„ of lachrymal gland	1	...	...	...	...	...	1	...	...	...
„ of neck	1	...	...	...	...	...	...	...	1	...
„ of thyroid . . . . .	...	1	...	...	...	...	...	...	...	1
„ of rectum	7	1	...	...	...	...	1	3	3	1
Epithelioma of tongue	12	...	...	...	...	...	...	...	6	6
„ „ recurrent	3	...	...	...	...	...	...	...	1	2
„ of floor of mouth	3	...	...	...	...	...	...	...	2	1
„ of lip	5	...	...	...	...	...	...	1	1	3
„ of nose . . . . .	...	1	...	...	...	...	...	...	...	1
„ of alveolar border	2	1	...	...	...	1	1	...	...	1
„ „ recurrent	1	1	...	...	...	1	...	...	...	1
„ of scrotum	1	...	...	...	...	...	...	1	...	...
„ of penis	5	...	...	...	...	...	3	...	...	2
„ of labium . . . . .	...	4	...	...	...	...	...	1	2	1
„ „ recurrent . . . . .	...	1	...	...	...	...	...	...	1	...
„ of bladder	1	1	...	...	...	...	...	...	1	1
„ of kidney	1	...	...	...	...	...	...	1	...	...
„ of hand	1	...	...	...	...	...	...	...	...	1
„ of sacrum . . . . .	...	6	...	...	...	...	6	...	...	...
„ of leg	1	...	...	...	...	...	...	...	...	1
„ of heel	1	...	...	...	...	...	...	...	...	1
„ of glands	5	...	...	...	...	...	...	1	2	2
Rodent ulcer	8	5	...	...	...	...	1	4	4	4
Sarcoma of tonsil . . . . .	...	1	...	...	...	1	...	...	...	...
„ of nose	1	...	...	...	...	...	...	...	1	...
„ „ recurrent	1	...	...	...	...	...	...	...	1	...
„ of testicle	1	...	...	...	...	...	1	...	...	...
„ of back	1	1	...	...	...	1	...	...	...	1

Surgical Operations.

Duration of residence after operation.									Result.				Remarks.
Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Mts. +12	C.	R.	U.	D.	
...	3	3	...	...	...	...	...	...	6	...	...	...	Scirrhus 1; duct carcinoma 1; soft cystic fibro-adenoma 2; chronic interstitial mastitis 2.
...	10	20	6	1	...	...	...	...	32	5	...	...	Scirrhus 33; sarcoma 3; tuberculous mastitis 1.
...	1	2	...	...	...	...	...	...	1	2	...	...	Previous scirrhus carcinoma of breast.
...	1	...	1	...	...	...	...	...	...	2	...	...	Previous scirrhus of breast. Erysipelas 1. <i>Vide</i> Special Table II.
2	2	3	...	...	...	...	...	...	2	5	...	...
1	...	1	...	...	...	...	...	...	...	1	...	1	Excision of upper jaw with eye. Fatal: general meningitis.
...	...	1	...	...	...	...	...	...	...	1	...	...	Recurrent. Removal of floor of orbit.
...	...	1	...	...	...	...	...	...	...	...	...	1	Common carotid ligatured. P.M.—Septic broncho-pneumonia. Cerebral softening.
...	...	1	...	...	...	...	...	...	1	...	...	...
...	1	1	3	3	...	...	...	...	5	2	...	1	Modified Kraske's operation 4. Chronic intussusception 1. Fatal: general peritonitis.
1	1	7	3	...	...	...	...	...	6	4	...	2	Ligature of lingual 1; of external carotid 2. Fatal cases: diabetic coma 1; broncho-pneumonia 1.
...	1	1	1	...	...	...	...	...	1	2	...	...	Glands involved 1.
...	1	2	...	...	...	...	...	...	2	1	...	...	Syme's operation 2.
...	3	2	...	...	...	...	...	...	5	...	...	...	Lower in all.
...	...	1	...	...	...	...	...	...	1	...	...	...
...	...	2	1	...	...	...	...	...	1	2	...	...	Upper jaw excised 1.
...	...	2	...	...	...	...	...	...	...	2	...	...	Cheek slit up 1.
...	1	...	...	...	...	...	...	...	1	...	...	...
...	1	2	2	...	...	...	...	...	5	...	...	...	Amputation of penis 4.
1	2	1	...	...	...	...	...	...	2	1	...	1	Fatal case. Shock.
...	...	1	...	...	...	...	...	...	1	...	...	...
...	...	...	1	1	...	...	...	...	...	1	...	1	Fatal case: recurrence and pelvic abscess.
...	...	1	...	...	...	...	...	...	...	...	...	1	Pyonephrosis and renal calculi. Pyæmia. <i>Vide</i> Special Table III.
...	...	1	...	...	...	...	...	...	1	...	...	...	Amputation of third metacarpal.
...	...	4	2	...	...	...	...	...	...	6	...	...	Same case. Rapid recurrence.
...	...	...	1	...	...	...	...	...	1	...	...	...	Amputation of thigh in lower third.
...	...	1	...	...	...	...	...	...	1	...	...	...	Amputation of leg.
...	3	1	1	...	...	...	...	...	1	4	...	...	Secondary in all.
...	3	6	4	...	...	...	...	...	9	4	...	...	Excision of condyle of jaw 1. Recurrent 5.
1	...	...	...	...	...	...	...	...	...	...	...	1	Lympho-sarcoma. P.M.—Septic broncho-pneumonia.
...	...	1	...	...	...	...	...	...	...	1	...	...	Round-celled. Excision with eye.
...	...	1	...	...	...	...	...	...	...	1	...	...	Same case as above. Recurrence in antrum.
...	...	1	...	...	...	...	...	...	...	1	...	...	Large round-celled. Recurrence later. <i>Vide</i> Medical Report.
...	1	...	1	...	...	...	...	...	2	...	...	...	Spindle-celled 2. Fungating 1.

TABLE III.—*Surgical*

SURGICAL OPERATIONS.	Sex.		Age.							
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60
REMOVAL OF TUMOURS AND NEW GROWTHS										
— <i>continued.</i>										
Sarcoma of hand . . . . .	...	1	...	...	...	...	...	...	...	1
„ of thigh . . . . .	...	2	...	...	...	...	...	2	...	...
„ of leg . . . . .	...	1	...	1	...	...	...	...	...	...
„ of lower jaw.	1	1	...	...	1	...	...	1	...	...
„ of radius . . . . .	...	1	...	...	...	...	1	...	...	...
„ of index . . . . .	...	1	...	...	...	...	...	...	1	...
„ of femur, recurrent	1	...	...	...	...	...	...	1	...	...
„ of tibia	2	...	...	...	...	1	...	...	...	1
„ of metatarsal	1	...	...	...	...	1	...	...	...	...
„ of supra-renal . . . . .	...	1	...	...	...	1	...	...	...	...
Lipoma	5	12	...	1	1	6	3	2	2	2
Papilloma	2	3	...	...	1	...	1	...	2	1
Polypus	9	11	...	2	7	5	3	1	1	1
Adenoids	12	19	3	7	17	4	...	...	...	...
Tonsils	2	...	...	...	1	...	1	...	...	...
Enchondroma . . . . .	...	2	...	...	...	2	...	...	...	...
Exostosis	4	7	...	...	6	2	2	1	...	...
Calcareous deposit	1	...	...	...	...	...	1	...	...	...
Ungual horns . . . . .	...	1	...	...	...	...	...	...	...	1
Nævus, excision of	1	13	5	...	2	6	...	...	1	...
„ electrolysis . . . . .	...	3	3	...	...	...	...	...	...	...
Fibroma	4	3	1	...	1	2	1	1	...	1
Fibro-adenoma . . . . .	...	13	...	...	...	8	2	3	...	...
Adenoma	1	1	...	...	...	...	...	1	...	1
Fibro-myoma . . . . .	...	1	...	...	...	...	...	1	...	...
Parotid tumour	1	2	...	...	1	...	1	1	...	...
Submaxillary tumour	1	...	...	...	...	...	1	...	...	...
Pigmented mole . . . . .	...	2	...	...	...	2	...	...	...	...
Cysts—										
Dermoid	4	4	2	1	3	2	...	...	...	...
Thyro-lingual . . . . .	...	2	...	...	...	2	...	...	...	...
Lymphatic	3	...	1	1	1	...	...	...	...	...

Operations—continued.

Duration of residence after operation.									Result.				Remarks.
Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Mts. +12	C.	R.	U.	D.	
...	1	...	...	...	...	...	...	...	1	...	...	...	Amputation of forearm in lower third.
...	...	...	1	1	...	...	...	...	...	2	...	...	Excision 1; amputation of hip 1. Same case. Many giant-cells.
...	...	...	1	...	...	...	...	...	1	...	...	...	Spindle-celled.
...	...	2	...	...	...	...	...	...	2	...	...	...	Myeloid 2. Tuberculous glands of neck 1.
...	...	1	...	...	...	...	...	...	1	...	...	...	Periosteal. Resection of radius.
...	1	...	...	...	...	...	...	...	1	...	...	...	Amputation.
...	...	...	...	1	...	...	...	...	1	...	...	...	Spindle-celled. Amputation of hip; previous amputation of thigh. Erysipelas. <i>Vide</i> Special Table II.
...	...	1	1	...	...	...	...	...	2	...	...	...	Periosteal and spindle-celled 2. Amputation of thigh 2.
...	...	...	1	...	...	...	...	...	1	...	...	...	Central. Syme's amputation.
...	...	...	1	...	...	...	...	...	1	...	...	...	Abdominal nephrectomy on Medical side. Kidney normal.
2	13	2	...	...	...	...	...	...	17	...	...	...	Fibro-adenoma of breast 2; groin 2, with suture of pillars 1.
...	1	1	3	...	...	...	...	...	5	...	...	...	Bladder 3; supra-pubic cystotomy 3; toe 1; neck 1.
16	4	...	...	...	...	...	...	...	15	4	...	1	Nasal 15; rectal 5. Fatal septic meningitis.
29	2	...	...	...	...	...	...	...	30	...	...	1	Tonsils 18. Fatal: chloroform narcosis in Out-patient Department.
2	...	...	...	...	...	...	...	...	2	...	...	...	Recurrent of phalanx.
1	1	...	...	...	...	...	...	...	1	1	...	...	Subungual 3; tibia 3; nasal bone 1; femur 1; metacarpal 1; metatarsal 1; fibula 1; multiple 1, with genu valgum. Mac-ewen's osteotomy of femur.
2	6	2	1	...	...	...	...	...	10	1	...	...	In toe.
...	...	1	...	...	...	...	...	...	1	...	...	...	Intermuscular 1. Fatal: erysipelas. <i>Vide</i> Special Table II.
...	1	...	...	...	...	...	...	...	1	...	...	...	Readmission 1.
1	5	7	1	...	...	...	...	...	9	4	...	1	Keloid 2; naso-pharyngeal 1; buttock 1; toe 1 (periosteal); back 1; multiple 1.
...	...	1	1	...	...	1	...	...	...	3	...	...	Breast 13.
2	3	1	1	...	...	...	...	...	7	...	...	...	Of palate 1, of skin 1.
3	10	...	...	...	...	...	...	...	13	...	...	...	Enucleated from broad ligament.
...	2	...	...	...	...	...	...	...	2	...	...	...
...	...	1	...	...	...	...	...	...	1	...	...	...
...	3	...	...	...	...	...	...	...	3	...	...	...
...	1	...	...	...	...	...	...	...	1	...	...	...
...	1	1	...	...	...	...	...	...	2	...	...	...	Face 1; flank 1.
2	4	1	1	...	...	...	...	...	7	1	...	...
1	1	...	...	...	...	...	...	...	2	...	...	...
...	2	1	...	...	...	...	...	...	3	...	...	...

TABLE III.—*Surgical*

SURGICAL OPERATIONS.	Sex.		Age.							
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60
REMOVAL OF TUMOURS AND NEW GROWTHS										
—continued.										
Cysts—										
Lymphatic, tapping	1	...	1	...	...	...	...	...	...	...
Ranula	1	2	...	1	2	...	...	...	...	...
Appendicular	1	3	...	...	1	1	1	1	...	...
Hydatid	3	1	...	...	...	...	3	1	...	...
Sebaceous	4	2	...	...	...	2	1	1	1	1
Of Bartholin . . . . .	...	1	...	...	...	1	...	...	...	...
Labial . . . . .	...	1	...	...	...	...	...	1	...	...
Blood cyst	1	...	...	...	...	1	...	...	...	...
Pancreatic	1	...	...	...	...	...	1	...	...	...
Ovarian . . . . .	...	6	...	...	...	2	...	1	2	1
„ suppurating . . . . .	...	1	...	...	...	...	1	...	...	...
Broad ligament . . . . .	...	1	...	...	...	...	...	1	...	...
Ovarian dermoid . . . . .	...	1	...	...	...	...	...	...	1	...
DIGESTIVE SYSTEM.										
Cancrum oris	2	...	2	...	...	...	...	...	...	...
Tuberculous ulcers of palate	1	...	...	...	...	...	1	...	...	...
Ulcer of tongue	1	...	...	...	...	...	...	1	...	...
Stenosis of pharynx and larynx	1	...	...	...	1	...	...	...	...	...
Foreign body in œsophagus	1	...	...	...	...	...	...	1	...	...
Herniotomy—										
Inguinal	4	1	1	...	...	1	...	1	...	2
Femoral . . . . .	...	2	...	...	...	...	1	...	1	...
Herniotomy and radical cure—										
Inguinal	19	3	...	...	1	2	5	6	5	3
Femoral	3	13	...	...	...	...	1	4	7	4
Umbilical . . . . .	...	2	...	...	...	...	...	1	1	...
Radical cure—										
Inguinal	133	25	10	6	47	51	24	9	7	4
Femoral . . . . .	...	12	...	...	...	5	5	...	...	2
Umbilical . . . . .	...	2	...	...	...	...	1	1	...	...
Ventral	1	1	...	...	1	...	1	...	...	...
Incision of appendicitic abscess	5	8	...	...	5	6	1	...	1	...
General peritonitis from appendicitis	7	1	...	...	4	3	...	...	...	1
Appendectomy	13	5	...	...	7	10	1	...	...	...

operations—continued.

Duration of residence after operation.									Result.				Remarks.
s.	Dys.	Wks	Mts.	Mts.	Mts.	Mts.	Mts.	Mts.	C.	R.	U.	D.	
4	5-13	2-4	1-2	2-4	4-6	6-9	9-12	+12					
...	...	1	...	...	...	...	...	...	...	1	...	...
1	2	...	...	...	...	...	...	...	1	2	...	...	Excision 1. Incision and plugging 2.
2	2	...	...	...	...	...	...	...	4	...	...	...
...	...	...	2	2	...	...	...	...	1	1	...	2	Aspiration 1; incision and drainage 3; excision 1; liver 1; pelvis 2; multiple of abdomen 1.
1	4	1	...	...	...	...	...	...	6	...	...	...	Excision 5; incision and scraping 1; circumcision 1.
1	...	...	...	...	...	...	...	...	1	...	...	...
...	1	...	...	...	...	...	...	...	1	...	...	...	Suppurating. Nature?.
...	1	...	...	...	...	...	...	...	1	...	...	...	Of thigh. No evidence of sarcoma.
...	...	...	1	...	...	...	...	...	1	...	...	...	Incision and drainage.
1	...	3	2	...	...	...	...	...	4	...	...	2	Fatal cases: carcinoma 1; chronic peritonitis 1. Double 1; multiple 1; ventral hernia and radical cure 1.
...	...	...	...	1	...	...	...	...	1	...	...	...	Incision and drainage.
...	...	...	1	...	...	...	...	...	1	...	...	...	Ovarian cyst 1.
...	...	1	...	...	...	...	...	...	1	...	...	...	Contained hair and a tooth.
2	...	...	...	...	...	...	...	...	...	...	...	2	Same case.
...	...	1	...	...	...	...	...	...	...	1	...	...	Cauterized. Tracheotomy for obstruction of respiration under chloroform.
1	...	...	...	...	...	...	...	...	1	...	...	...	Scraped.
...	...	...	...	1	...	...	...	...	...	1	...	...	Thyrotomy. Syphilitic.
...	...	1	...	...	...	...	...	...	1	...	...	...	Œsophagotomy. Tooth-plate.
2	1	1	1	...	...	...	...	...	2	...	...	3	Gut gangrenous 1; artificial anus.
1	1	...	...	...	...	...	...	...	...	...	...	2	Gut gangrenous 1. Resection and circular enterorrhaphy.
1	1	13	6	1	...	...	...	...	20	...	...	2	
2	3	10	1	...	...	...	...	...	15	...	...	1	Enterotomy later 1.
...	...	2	...	...	...	...	...	...	2	...	...	...
...	26	124	8	...	...	...	...	...	158	...	...	...	Excision of varicocele 9, of hydrocele 2; removal of testicle 3; circumcision 1.
...	2	10	...	...	...	...	...	...	10	1	...	1	Fæcal fistula 1. Fatal: pyæmia. <i>Vide</i> Special Table III.
...	...	2	...	...	...	...	...	...	2	...	...	...
...	1	1	...	...	...	...	...	...	2	...	...	...	Previous suppurating ovarian cyst 1.
...	...	2	9	2	...	...	...	...	12	...	...	1	Fatal: pulmonary tuberculosis; abscess to left of middle line.
8	...	...	...	...	...	...	...	...	...	...	...	8	Irrigation 8. Local abscess in 1.
...	...	15	3	...	...	...	...	...	18	...	...	...	General peritonitis 1. Ovariectomy 1.

TABLE III.—*Surgical.*

SURGICAL OPERATIONS.	Sex.		Age.							
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60
DIGESTIVE SYSTEM—continued.										
Intussusception	3	3	6	...	...	...	...	...	...	...
Volvulus of sigmoid flexure . . . . .	...	1	...	...	...	...	...	1	...	...
„ of small intestine	2	...	...	...	...	...	...	1	...	1
Strangulation by band . . . . .	...	1	...	...	...	...	...	...	1	...
Matting of small gut	2	...	...	...	1	...	...	...	1	...
Kinking of bowel	2	...	2	...	...	...	...	...	...	...
Obstruction	1	...	...	...	...	...	1	...	...	...
Stricture of large intestine	1	...	...	...	...	1	...	...	...	...
Perforated gastric ulcer	1	...	...	...	...	...	...	1	...	...
Tuberculous peritonitis	3	2	2	1	1	1	...	...	...	...
Cholecystotomy	1	1	...	...	...	...	1	1	...	...
Cholelithotomy	1	1	...	...	...	...	...	...	1	...
Carcinoma of pylorus . . . . .	...	1	...	...	...	...	...	1	...	...
Stricture of pylorus and œsophagus	3	...	...	...	3	...	...	...	...	...
Abdominal abscess . . . . .	...	1	...	...	...	1	...	...	...	...
Hepatic abscess	3	...	...	...	...	...	1	2	...	...
Subdiaphragmatic abscess	2	3	...	1	...	3	1	...	...	...
Suture of ruptured small gut	1	...	...	...	...	...	...	...	1	...
Splenectomy	2	...	...	...	2	...	...	...	...	...
Ruptured liver	1	...	...	...	...	1	...	...	...	...
Lateral anastomosis of small gut . . . . .	...	1	...	...	...	...	1	...	...	...
Enterotomy . . . . .	...	1	...	...	...	...	...	...	1	...
Lateral anastomosis of large gut	1	...	...	...	...	...	...	...	...	...
Peritoneal adhesions	1	...	...	...	...	1	...	...	...	...

Operations—continued.

Duration of residence after operation.									Result.				Remarks.
ys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Mts. +12	C.	R.	U.	D.	
4	...	2	...	...	...	...	...	...	2	...	...	4	Ileo-cæcal in all. Cœliotomy and reduction 4; cœliotomy, reduction, and appendectomy 1; cœliotomy and excision of cæcum and portion of colon 1; caseous mesenteric glands 1.
...	...	1	...	...	...	...	...	...	1	...	...	...	Cœliotomy and reduction.
2	2	Cœliotomy 2; drainage of peritoneal cavity 1.
1	1	Intestine gangrenous; enterotomy; removal of fibroid of uterus.
...	1	1	...	...	...	...	2	...	...	...	Lateral anastomosis 2. Senn's plates 1. Halstead's method 1. Cause: tuberculous peritonitis 1, after strangulated hernia 1.
2	2	Adhesion of gut to caseous gland 2. Enterotomy 1; drainage of gut 1.
1	1	Cause? Cœliotomy; peritonitis.
1	1	Enterotomy and division of stricture.
1	1	Cœliotomy and drainage.
1	...	1	2	...	1	...	...	...	...	3	...	2	Evacuation of fluid 4. Excision of Fallopian tubes and portion of omentum 1.
...	1	1	...	...	...	...	1	1	...	...	Empyema of gall-bladder 1; obstructive jaundice 1. Cause?
...	1	1	...	...	...	...	2	...	...	...
...	1	...	...	...	...	...	1	...	...	Gastro-enterostomy 1. Halstead's method.
...	1	...	2	...	...	...	...	...	...	2	...	1	Same case. Exploratory cœliotomy 1; gastrostomy and duodenostomy 1; dilatation of œsophagus 1.
...	1	...	...	...	...	...	1	...	...	...	Local abscess from perforated gastric ulcer.
...	...	1	2	...	...	...	...	...	2	...	...	1	
1	3	1	...	...	...	...	...	...	...	2	...	3	Female, same case. Cause: perforated duodenal ulcer. Appendicitis 4; incised through pleura 2.
1	1	Ruptured in two places. Peritonitis.
1	1	...	...	...	...	...	1	...	...	1	Fatal case: hæmothorax and wound of lung.
1	1	Plugging of rent with gauze.
1	1	Matting of small gut by secondary carcinoma. Ileum and cæcum joined.
1	1	For obstruction after strangulated femoral hernia.
1	1	Carcinoma of splenic flexure. Murphy's button.
...	...	1	...	...	...	...	...	...	1	...	...	...	Separation of adhesions.

Operations—continued.

Duration of residence after operation.									Result.				Remarks.
rs.	Dys.	Wks	Mts.	Mts.	Mts.	Mts.	Mts.	Mts.	C.	R.	U.	D.	
4	5-13	2-4	1-2	2-4	4-6	6-9	9-12	+12					
0	...	10	4	...	...	...	...	...	3	3	7	11	Carcinoma of gall-bladder 2, stomach 1, cæcum 1, pancreas 1, ovary 1, abdomen 1, liver 1; rectum and pelvic peritonitis 1; acute dilatation of stomach 1; ulcerative colitis 1; tumour of abdomen 1. Sarcoma of kidney 1, of abdomen 1; retro-peritoneal 1. Uterine fibroids 1; strangulated hernia 2; obstruction after hernia 1. Contusion of abdomen 1; ruptured duodenum; ruptured bladder 1; rents not found. Fracture of ilium and intra-peritoneal hæmorrhage 1. Fatal cases: carcinoma of gall-bladder, cæcum, rectum, stomach. Acute dilatation of stomach. Retro-peritoneal sarcoma. Strangulated hernia 2; obstruction following hernia 1. Ruptured duodenum, bladder.
2	...	3	1	...	1	...	...	...	...	5	...	2	Albert's method 4; Senn's 1; through rectus 1. Fatal cases: for foreign body with suture of wall 1; carcinoma of œsophagus 1.
1	1	1	...	...	1	...	...	...	...	2	...	2	Carcinoma of colon 3, of rectum with intussusception 1.
...	2	2	9	...	...	...	...	...	...	11	...	2	Cœliotomy and irrigation 1; fibrous stricture of rectum 1; fistula in ano. Fatal cases: carcinoma of rectum and perforation 1; stricture of rectum 1.
1	...	...	...	...	...	...	...	...	...	...	...	1	
2	15	10	3	...	...	...	...	...	29	1	...	...	Excision 5.
...	14	35	2	...	...	...	...	...	51	...	...	...
...	9	5	...	...	...	...	...	...	14	...	...	...
...	...	1	...	...	...	...	...	...	1	...	...	...
...	1	...	1	...	...	...	...	...	1	...	...	1	Fatal: pneumonia.
3	...	...	...	...	...	...	...	...	3	...	...	...	Stretching of sphincter.
...	2	...	...	...	...	...	...	...	2	...	...	...
...	1	...	...	...	...	...	...	...	1	...	...	...
...	1	...	1	...	...	...	...	...	1	1	...	...	Excision of portion 2.
...	...	...	1	...	...	...	...	...	1	...	...	...	Suture of rent with cœliotomy and irrigation. Small gut prolapsed through rent.
3	6	3	1	1	...	...	...	...	13	...	...	1	Fatal case: chloroform narcosis in Out-patient Department.
...	5	...	...	...	...	...	...	...	5	...	...	...
...	1	...	1	...	...	...	...	...	2	...	...	...	Males 2 included under Circumcision.
...	...	2	...	...	...	...	...	...	2	...	...	...	Cautery.
1	...	...	...	...	...	...	...	...	1	...	...	...	Hat-pin.

TABLE III.—*Surgical*

SURGICAL OPERATIONS.	Sex.		Age.							
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+6
GENITO-URINARY SYSTEM—<i>continued.</i>										
Extraction of urethral calculus	4	...	1	...	1	1	...	...	...	1
Perinæal section	1	...	1	...	...	...	...	...	...	...
Cock's perinæal puncture	6	...	...	...	...	...	2	2	1	1
Internal urethrotomy	8	...	...	...	...	...	2	1	3	2
External urethrotomy	9	...	...	...	...	...	2	3	2	2
Incision of extravasation of urine	2	...	...	...	...	...	2	...	...	...
„ of urethral abscess	9	...	...	...	1	...	2	2	3	1
„ of pelvic abscess . . . . .	...	3	...	...	...	3	...	...	...	...
Excision of Fallopian tube . . . . .	...	1	...	...	...	1	...	...	...	...
Supra-pubic cystotomy	7	1	...	...	...	...	1	...	3	4
Exploration of bladder . . . . .	...	1	...	...	...	...	...	...	...	1
Perinæal cystotomy	2	...	...	...	...	...	...	...	...	2
Vasectomy	1	...	...	...	...	...	...	...	...	1
Prostatectomy	1	...	...	...	...	...	...	...	...	1
Nephropexy . . . . .	...	4	...	...	...	1	3	...	...	...
Lumbar nephrotomy	2	3	...	...	...	...	4	1	...	...
„ nephrolithotomy	4	3	...	...	...	2	4	...	...	1
Abdominal nephrolithotomy	1	...	...	...	...	...	...	...	1	...
Lumbar nephrectomy	1	1	...	...	...	...	2	...	...	...
Incision of hydronephrosis . . . . .	...	1	...	...	...	1	...	...	...	...
Retro-peritoneal uretero-lithotomy . . . . .	...	2	...	...	1	1	...	...	...	...
Supra-pubic lithotomy	3	...	1	1	...	...	...	...	...	1
Litholapaxy	1	...	...	...	...	...	...	...	1	...
Removal of foreign body from bladder	1	...	...	...	...	...	...	...	1	...
For undescended testis	8	...	...	1	6	1	...	...	...	...
Castration	12	...	...	2	5	1	4	...	...	...
Scraping of tuberculous testis	2	...	...	1	...	...	1	...	...	...
Radical cure of hydrocele	14	...	...	1	4	3	2	2	...	2
Tapping of tunica vaginalis	3	...	...	...	2	1	...	...	...	...
Excision of hydrocele of canal of Nuck . . . . .	...	2	1	...	...	...	1	...	...	...
„ „ of cord	1	...	...	...	1	...	...	...	...	...
Tapping of hydrocele of cord	1	...	...	...	1	...	...	...	...	...
Excision of spermatocele	1	...	...	...	1	...	...	...	...	...
„ of chronic interstitial mastitis . . . . .	...	4	...	...	...	1	2	1	...	...
„ „ galactoceles . . . . .	...	1	...	...	...	1	...	...	...	...
Scraping of tuberculous mastitis . . . . .	...	2	...	...	2	...	...	...	...	...
Tuberculous ovary . . . . .	...	1	...	...	...	1	...	...	...	...
Ruptured tubal pregnancy . . . . .	...	2	...	...	...	...	2	...	...	...

Operations—continued.

Duration of residence after operation.									Result.				Remarks.
Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Mts. +12	C.	R.	U.	D.	
2	1	1	...	...	...	...	...	...	4	...	...	...	Cellulitis of penis and scrotum 1.
...	...	...	1	...	...	...	...	...	1	...	...	...	For impacted urethral calculus.
1	1	2	2	...	...	...	...	...	3	...	...	3	Extravasation of urine 2; both fatal.
...	2	5	1	...	...	...	...	...	8	...	...	...
...	...	4	4	1	...	...	...	...	9	...	...	...	Wheelhouse 6; periurethral abscess 1.
...	...	...	2	...	...	...	...	...	1	...	...	1	Fatal pyæmia. <i>Vide</i> Special Table III.
...	5	2	2	...	...	...	...	...	7	1	...	1	See also Cock's puncture.
...	...	2	1	...	...	...	...	...	2	1	...	...	Fatal pyæmia. <i>Vide</i> Special Table III.
...	...	...	1	...	...	...	...	...	...	1	...	...	Readmission 1.
1	...	1	6	...	...	...	...	...	...	6	...	2	Stricture 1; enlarged prostate 6. Recur-
...	1	...	...	...	...	...	...	...	...	1	...	...	rent carcinoma of uterus 1.
...	2	...	...	...	...	...	...	...	...	...	...	2	Enlarged prostate 2.
...	...	1	...	...	...	...	...	...	...	1	...	...	Enlarged prostate.
...	...	1	...	...	...	...	...	...	1	...	...	...	Supra-pubic route 1.
...	...	...	4	...	...	...	...	...	4	...	...	...
...	...	1	2	1	...	1	...	...	2	3	...	...	Pyonephrosis 2. Nephralgia 3.
2	...	2	3	...	...	...	...	...	4	1	...	2	Fatal cases: hæmorrhage 1; shock 1.
...	1	...	...	...	...	...	...	...	...	...	...	1	P.M.—Pneumonia.
2	...	...	...	...	...	...	...	...	...	...	...	2	Pyonephrosis 1; hydronephrosis 1. Fatal
...	...	...	...	...	...	...	...	...	...	...	...	...	shock: lardaceous disease 1. See also
...	...	...	...	1	...	...	...	...	...	1	...	...	"Removal of tumours."
...	...	...	2	...	...	...	...	...	2	...	...	...	Abdominal incision.
...	1	2	...	...	...	...	...	...	2	...	...	1	Fatal: right pyonephrosis with calculi.
...	...	1	...	...	...	...	...	...	1	...	...	...
...	...	...	1	...	...	...	...	...	1	...	...	...	Piece of wood? Supra-pubic route.
...	3	5	...	...	...	...	...	...	8	...	...	...	Double 1. Radical cure of hernia 2.
...	5	5	2	...	...	...	...	...	11	1	...	...	For undescended testis 6; suture of ring 4;
...	...	...	...	...	...	...	...	...	...	...	...	...	tuberculous testis 3; syphilitic 2, hydro
...	2	...	...	...	...	...	...	...	...	2	...	...	cele 1.
...	7	7	...	...	...	...	...	...	14	...	...	...
1	2	...	...	...	...	...	...	...	3	...	...	...
...	...	2	...	...	...	...	...	...	2	...	...	...	Suture of canal 2.
...	1	...	...	...	...	...	...	...	1	...	...	...
...	1	...	...	...	...	...	...	...	1	...	...	...
...	1	...	...	...	...	...	...	...	1	...	...	...
...	4	...	...	...	...	...	...	...	4	...	...	...
...	1	...	...	...	...	...	...	...	1	...	...	...
...	1	1	...	...	...	...	...	...	2	...	...	...
...	...	...	1	...	...	...	...	...	...	...	...	1	P.M.—Tuberculous peritonitis.
1	...	...	1	...	...	...	...	...	1	...	...	1	Cœliotomy and plugging in fatal case. Ex-
...	...	...	...	...	...	...	...	...	...	...	...	...	cision of Fallopian tube 1.

TABLE III.—*Surgical*

SURGICAL OPERATIONS.	Sex.		Age.								
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60	
VASCULAR SYSTEM.											
Ligature of axillary artery	1	...	...	...	...	1	...	...	...	...
Ligation of superficial femoral	1	...	...	...	...	1	...	...	...	...
" of radial	1	...	...	...	...	1	...	...	...	...
" of popliteal artery and vein	1	...	...	...	...	...	...	...	1	...
" of internal jugular vein	1	3	1	1	1	1	...	...	...	...
Excision of varicose veins	43	37	...	...	14	50	12	3	1	...
" of varicocele	81	...	...	...	48	28	3	1	1	...
Subcutaneous ligature of varicocele	2	...	...	...	2	...	...	...	...	...
LYMPHATIC SYSTEM.											
Excision of inflamed glands	3	1	...	..	...	...	...	3	1	...
" of tuberculous glands	24	49	3	9	25	27	6	2	1	...	
" of lymphadenomatous	4	...	...	...	1	...	3	...	...	...
THYROID BODY.											
Excision of cyst . . . . .	...	4	...	...	1	...	2	...	...	1
" of adenoma . . . . .	...	2	...	...	...	1	...	1	...	...
" of part of gland	1	5	...	...	2	...	...	3	...	1
OSSEOUS SYSTEM.											
Excision of rib	5	1	1	1	2	2	...	...	...	...
Exploration of humerus	2	...	...	...	...	2	...	...	...	...
" of tibia	1	...	...	...	...	...	1	...	...	...
" of occipital	1	...	...	...	...	...	1	...	...	...
" of femur . . . . .	...	1	...	...	1	...	...	...	...	...
Linear osteotomy	1	...	...	...	1	...	...	...	...	...
Scraping for caries of—											
Sternum	2	...	1	1	...	...	...	...	...	...
Rib	6	2	1	...	5	2	...	...	...	...
Superior maxilla	1	...	1	...	...	...	...	...	...	...
Humerus . . . . .	...	1	...	...	1	...	...	...	...	...
Radius	1	2	2	...	1	...	...	...	...	...
Ulna . . . . .	...	1	...	...	1	...	...	...	...	...
Metacarpus	2	...	1	...	...	1	...	...	...	...
Phalanges	1	...	1	...	...	...	...	...	...	...
Pelvis	11	7	...	...	11	4	2	1	...	...
Femur	5	6	...	1	5	2	2	...	1	...	
Tibia	11	...	2	...	9	...	...	...	...	...
Tarsus	4	10	...	2	8	3	...	1	...	...
Metatarsus	3	3	...	1	4	1	...	...	...	...
Removal of necrosed bone from—											
Inferior maxilla	7	2	1	4	...	1	2	...	1	...	
Superior maxilla	1	1	...	...	...	...	...	1	...	1

Operations—continued.

Duration of residence after operation.									Result.				Remarks.
ys.	Dys.	Wks	Mts.	Mts.	Mts.	Mts.	Mts.	Mts.	C.	R.	U.	D.	
4	5-13	2-4	1-2	2-4	4-6	6-9	9-12	+12					
...	...	...	1	...	...	...	...	...	1	...	...	...	For rupture.
...	...	...	1	...	...	...	...	...	...	1	...	...	Popliteal aneurysm.
...	1	...	...	...	...	...	...	...	1	...	...	...	Traumatic aneurysm. Excision.
...	1	...	...	...	...	...	...	...	...	...	...	1	
2	1	1	...	...	...	...	...	...	...	...	...	4	Lateral sinus pyæmia 4.
...	26	52	2	...	...	...	...	...	80	...	...	...	Whitehead 1.
...	67	12	1	1	...	...	...	...	81	...	...	...
...	2	...	...	...	...	...	...	...	2	...	...	...
...	2	2	...	...	...	...	...	...	4	...	...	...
...	53	18	2	...	...	...	...	...	55	18	...	...
...	1	2	1	...	...	...	...	...	1	3	...	...	Readmission 2.
1	3	...	...	...	...	...	...	...	4	...	...	...
...	2	...	...	...	...	...	...	...	2	...	...	...
...	2	2	...	2	...	...	...	...	6	...	...	...	Excision of isthmus 1; of isthmus and lobe 2; of lobe 3. Adenoma 2; parenchymatous 3; tracheotomy 1.
...	...	3	1	2	...	...	...	...	2	4	...	...
...	...	2	...	...	...	...	...	...	...	2	...	...
...	1	...	...	...	...	...	...	...	1	...	...	...
...	1	...	...	...	...	...	...	...	...	1	...	...
...	1	...	...	...	...	1	...	...	...	1	...	...
...	1	...	...	...	...	...	...	...	1	...	...	...
...	1	...	...	...	...	...	...	...	1	...	...	...
...	1	...	...	...	...	...	...	...	1	...	...	...
...	1	...	...	...	...	...	...	...	1	...	...	...
...	1	...	...	...	...	...	...	...	1	...	...	...
1	3	3	4	3	1	1	2	...	2	15	...	1	Fatal case: 4 previous operations. Sacro-iliac disease.
...	...	4	5	2	...	...	...	...	7	4	...	...
...	...	5	3	2	1	...	...	...	5	5	...	1	Abscess of tibia 2.
...	...	2	7	4	1	...	...	...	3	11	...	...
...	2	4	...	...	...	...	...	...	3	3	...	...
1	7	1	...	...	...	...	...	...	7	2	...	...
...	2	...	...	...	...	...	...	...	2	...	...	...

TABLE III.—Surgical

SURGICAL OPERATIONS.	Sex.		Age.							
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60
OSSEOUS SYSTEM—continued.										
Removal of necrosed bone from—										
Malar	1	3	1	1	1	1	...	...	...	...
Calvarium	1	...	...	...	...	...	1	...	...	...
Nasal bones . . . . .	...	2	...	...	2	...	...	...	...	...
Palate . . . . .	...	1	...	...	...	1	...	...	...	...
Humerus	2	1	...	...	3	...	...	...	...	...
Carpus	1	...	...	...	...	1	...	...	...	...
Metacarpus	1	1	1	...	1	...	...	...	...	...
Pelvis	3	1	...	3	1	...	...	...	...	...
Femur	5	2	1	1	3	1	1	...	...	...
Tibia	5	4	...	1	4	...	2	1	...	1
Fibula	1	1	...	1	1	...	...	...	...	...
Metatarsus	2	2	...	...	2	...	...	...	...	2
Phalanges	4	...	...	1	...	2	1	...	...	...
ARTICULAR SYSTEM.										
Shoulder—Excision	2	1	...	...	1	...	2	...	...	...
Elbow—Excision	4	...	1	...	1	1	...	...	1	...
Wrist—Excision . . . . .	...	2	...	...	1	1	...	...	...	...
Hip—Excision	2	3	...	2	2	1	...	...	...	...
Arthrectomy	1	1	...	1	1	...	...	...	...	...
Knee—Excision	3	5	...	...	3	2	1	2	...	...
Arthrectomy	8	1	2	1	2	2	2	...	...	...
Arthrotomy	1	3	...	1	2	...	...	1	...	...
Extraction of loose bodies	3	...	...	...	...	2	...	...	...	1
Ankle—Excision . . . . .	...	2	...	1	...	...	...	1	...	...
Arthrectomy	1	1	...	1	...	...	...	...	1	...
Sacro-iliac disease—Arthrectomy . . . . .	...	5	1	2	...	2	...	...	...	...
Metacarpo-phalangeal—Arthrotomy	1	...	...	...	...	...	1	...	...	...
Metatarso-phalangeal—Excision . . . . .	...	3	...	...	...	2	1	...	...	...
Phalangeal—Excision	15	14	...	...	22	4	3	...	...	...
Passive movement	7	5	1	2	...	2	5	1	...	1
LOCOMOTOR SYSTEM—Various.										
Excision of bursæ and ganglia	7	17	...	...	5	10	6	2	...	1
„ of teno-synovitis	1	1	...	...	1	...	...	...	1	...
Scraping of teno-synovitis	3	1	...	2	1	...	...	...	...	1
Bone grafting	1	...	...	...	1	...	...	...	...	...
Excision of myositis ossificans . . . . .	...	1	...	...	...	...	1	...	...	...
Amputation for disease—Hip	2	1	...	...	3	...	...	...	...	...

Operations—continued.

Duration of residence after operation.									Result.				Remarks.
ys.	Dys.	Wks	Mts.	Mts.	Mts.	Mts.	Mts.	Mts.	C.	R.	U.	D.	
4	5-13	2-4	1-2	2-4	4-6	6-9	9-12	+12					
...	2	1	1	...	...	...	...	...	4	...	...	...	Necrosis of tibia 1; of temporal with anky- losis of jaw 1.
...	...	...	1	...	...	...	...	...	1	...	...	...	Syphilitic.
...	1	...	1	...	...	...	...	...	1	1	...	...	Tuberculin 1.
1	...	...	...	...	...	...	...	...	1	...	...	...
...	2	...	1	...	...	...	...	...	3	...	...	...	Ankylosis of elbow 1.
...	...	...	1	...	...	...	...	...	1	...	...	...
...	...	1	1	...	...	...	...	...	1	1	...	...	Caries of malar 1.
...	...	2	...	...	1	1	...	...	1	3	...	...	Tuberculous hip 3.
...	2	2	1	1	1	...	...	...	7	...	...	...
...	2	...	6	...	1	...	...	...	5	4	...	...	Caries of tibia 1; necrosis of metatarsal 1.
...	...	...	1	1	...	...	...	...	2	...	...	...
...	...	1	2	1	...	...	...	...	2	2	...	...
...	3	1	...	...	...	...	...	...	4	...	...	...
...	...	1	2	...	...	...	...	...	2	1	...	...	Tubercle 2. Sinus 1; abscess 1. Disloca- tion 1.
...	1	2	1	...	...	...	...	...	3	1	...	...	Of head of radius 1; of capitellum 1; flail elbow-joint 1; ankylosis of elbow 2.
...	...	1	1	...	...	...	...	...	2	...	...	...	Tubercle 2. Langenbeck 2.
...	...	...	2	...	...	2	1	...	2	2	...	1	Tubercle 4; post-typhoid dislocation 1; partial excision 1; anterior incision 3; posterior 1. Fatal: general tuberculosis.
...	...	1	1	...	...	...	...	...	...	2	...	...
...	...	...	3	5	...	...	...	...	8	...	...	...	Tubercle 8. Partial 1.
...	...	4	5	...	...	...	...	...	5	4	...	...	Tubercle 6; chronic synovitis 2; partial 3.
...	...	...	...	1	2	1	...	...	1	3	...	...	Tubercle 2; acute suppurative arthritis 2.
...	2	1	...	...	...	...	...	...	3	...	...	...
...	...	1	...	1	...	...	...	...	2	...	...	...	Partial excision; previous arthrectomy 1.
...	...	...	1	1	...	...	...	...	1	...	...	1	Compound dislocation of ankle 1.
...	1	...	...	2	...	1	1	...	...	5	...	...	Anterior incision 1.
...	1	...	...	...	...	...	...	...	...	1	...	...	Double 1.
...	2	1	...	...	...	...	...	...	3	...	...	...	Septic arthritis.
8	20	1	...	...	...	...	...	...	29	...	...	...	Hallux valgus in all.
1	5	4	1	1	...	...	...	...	5	7	...	...	Hammer-toe 27; tuberculous 1; ankylosis 1.
6	15	2	1	...	...	...	...	...	24	...	...	...	Tuberculous 2.
1	1	...	...	...	...	...	...	...	2	...	...	...	Tuberculous 2.
...	2	1	1	...	...	...	...	...	2	2	...	...	Tuberculous 4. Readmission 1.
...	...	...	...	1	...	...	...	...	1	...	...	...
...	...	1	...	...	...	...	...	...	1	...	...	...	In adductor muscles.
1	...	1	1	...	...	...	...	...	...	2	...	1	Tuberculous 3; Furneaux Jordan 2; ante- rior racket incision 1.

TABLE III.—*Surgical*

SURGICAL OPERATIONS.	Sex.		Age.							
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60
LOCOMOTOR SYSTEM—<i>Various—continued.</i>										
Amputation for disease—Thigh	5	8	...	...	6	...	1	1	2	3
Leg	2	3	...	...	1	...	1	...	1	2
Syme . . . . .	...	1	...	...	...	...	...	1	...	...
Arm	4	...	...	...	3	...	...	1	...	...
Forearm . . . . .	...	1	...	...	...	...	1	...	...	...
Phalanges	7	4	3	...	1	5	...	1	1	...
Primary amputation—Arm	2	...	...	...	1	...	1	...	...	...
Forearm	2	...	...	...	1	...	...	...	1	...
Thigh	2	...	...	...	...	1	1	...	...	...
Leg	1	1	...	1	1	...	...	...	...	...
Syme	1	...	...	...	...	...	...	...	...	1
Digits	2	2	...	...	1	...	...	1	...	2
Phalanges	3	...	...	...	2	1	...	...	...	...
Secondary amputation—Arm	1	2	...	...	...	1	...	1	...	1
Forearm	1	...	...	...	...	1	...	...	...	...
Thigh	1	...	...	...	...	...	...	...	1	...
Leg	4	...	...	...	...	...	1	1	1	1
Digits	1	...	...	...	...	1	...	...	...	...
Wiring of patella	25	2	...	...	...	4	11	7	4	1
„ of tibia	4	...	...	...	1	2	...	1	...	...
„ of femur	3	...	...	1	1	...	...	...	1	...
„ of humerus . . . . .	...	1	...	...	...	...	...	1	...	...
„ of olecranon	2	...	...	...	...	1	1	...	...	...
Reduction of dislocations—Humerus	1	2	...	...	...	..	1	1	...	1
Radius and ulna	3	...	...	...	2	1	...	...	...	...
Wrist	1	...	...	...	...	1	...	...	...	...
Thumb	1	...	...	...	...	...	...	...	1	...
Knee. . . . .	...	1	...	...	1	...	...	...	...	...
Ankle	1	1	...	...	...	...	...	1	1	...
Subastragaloid	1	...	...	...	...	...	...	...	...	1
Astragalus	1	...	...	...	...	...	...	...	1	...
Resection and suture of tendons	2	3	...	...	2	2	1	...	...	...
Suture of tendons	11	4	...	3	5	5	...	1	1	...
Lengthening of tendons	2	...	1	...	1	...	...	...	...	...

Operations—continued.

Duration of residence after operation.										Result.				Remarks.
Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Mts. +12		C.	R.	U.	D.	
2	...	3	6	2	...	...	...	...		9	2	...	2	Middle third 4; lower third 7. Diabetic gangrene 1. Preliminary to amputation of hip 2.
...	...	...	2	2	1	...	...	...		4	1	...	...	Upper third 3; lower third 2. Diabetic gangrene 1.
...	...	...	1	...	...	...	...	...		1	...	...	...	For talipes.
...	4	...	...	...	...	...	...	...		3	1	...	...	Upper third 3; lower third 1. Readmission 1. Conical stump.
...	...	1	...	...	...	...	...	...		1	...	...	...	Lower third.
3	3	4	1	...	...	...	...	...		11	...	...	...	Toes 3; fingers 8.
...	...	2	...	...	...	...	...	...		2	...	...	...	Lower third 2.
...	1	1	...	...	...	...	...	...		2	...	...	...
1	...	1	...	...	...	...	...	...		1	...	...	1	Fatal: Syme's amputation as well.
...	...	1	...	1	...	...	...	...		2	...	...	...	Upper third 2.
...	...	1	...	...	...	...	...	...		1	...	...	...	Amputation of thigh as well 1.
...	1	...	3	...	...	...	...	...		3	1	...	...	Fingers 4.
2	...	1	...	...	...	...	...	...		3	...	...	...	Fingers 3.
...	...	2	1	...	...	...	...	...		3	...	...	...	Emphysematous gangrene 1. Lower third 3.
...	...	...	...	1	...	...	...	...		1	...	...	...	Lower third.
...	1	...	...	...	...	...	...	...		...	...	...	1	Ruptured popliteal vessels.
1	1	2	...	...	...	...	...	...		2	...	...	2	Upper third 4.
...	...	1	...	...	...	...	...	...		1	...	...	...
...	1	9	11	6	...	...	...	...		26	1	...	...	Refracture 2. Suppuration 3.
...	...	1	1	2	...	...	...	...		4	...	...	...	Ununited fractures 1. Compound fractures 3. Screwed 1.
...	...	...	...	2	1	...	...	...		3	...	...	...	Screwed 2; pegged 1; ununited fractures 2.
...	...	...	...	1	...	...	...	...		...	1	...	...	Ununited fracture. Suture of musculo-spiral nerve.
...	1	1	...	...	...	...	...	...		2	...	...	...	Simple fractures.
2	...	...	1	...	...	...	...	...		1	2	...	...	Reduction impossible 2; followed by excision of head 1.
1	1	1	...	...	...	...	...	...		3	...	...	...
...	...	1	...	...	...	...	...	...		...	1	...	...	Compound; also dislocation of radius and ulna.
1	...	...	...	...	...	...	...	...		1	...	...	...
...	...	...	1	...	...	...	...	...		1	...	...	...	Forwards with fracture of opposite femur.
...	1	...	...	...	1	...	...	...		1	...	...	1	Compound 2. Excision of ankle later 1.
...	...	...	1	...	...	...	...	...		...	1	...	...	Fatal: tetanus. <i>Vide</i> Special Table II.
...	...	...	1	...	...	...	...	...		...	1	...	...	Compound. Fatal later after amputation of leg.
...	...	1	...	...	...	...	...	...		...	1	...	...	Excision of astragalus. Fatal later after amputation of leg.
...	1	3	1	...	...	...	...	...		3	2	...	...
6	8	...	1	...	...	...	...	...		14	1	...	...	Seminembranosus 1.
...	...	1	...	...	...	1	...	...		2	...	...	...

TABLE III.—*Surgical*

SURGICAL OPERATIONS.	Sex.		Age.							
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60
NERVOUS SYSTEM.										
Removal of portion of skull . . .	3	...	1	...	...	1	1	...	...	...
Tapping of lateral ventricle . . .	1	...	...	...	...	...	1	...	...	...
Quinke's puncture . . .	2	...	...	1	1	...	...	...	...	...
Exploration of frontal lobe . . .	...	3	...	...	1	...	...	...	...	...
„ of nerves . . .	2	...	...	...	1	1	...	...	...	...
Nerve suture . . .	2	1	...	...	...	1	2	...	...	...
Resection and suture of nerves . . .	2	2	...	...	1	1	1	1	...	...
„ of nerves . . .	...	1	...	...	...	...	...	1	...	...
Neurotomy . . .	...	1	...	...	...	...	...	...	...	1
Laminectomy . . .	1	...	...	...	...	...	1	...	...	...
RESPIRATORY SYSTEM.										
Estlander . . .	1	...	...	...	...	1	...	...	...	...
Tracheotomy . . .	5	6	1	3	...	1	1	2	...	3
Intubation . . .	...	1	...	1	...	...	...	...	...	...
Laryngotomy . . .	1	...	...	...	...	...	...	...	1	...
Thyrotomy . . .	2	...	...	...	1	...	...	...	1	...
Turbinotomy . . .	3	4	...	...	4	3	...	...	...	...
Scraping for rhinitis . . .	...	3	...	...	1	2	...	...	...	...
Drainage of maxillary antrum . . .	4	4	...	...	1	3	1	3	...	...
„ of frontal sinus . . .	...	1	...	...	...	1	...	...	...	...
Exploration of frontal sinus . . .	1	1	...	...	...	1	1	...	...	...
Resection of rib . . .	17	5	7	3	5	4	...	...	2	1
Aspiration of lung . . .	1	...	1	...	...	...	...	...	...	...
AUDITORY SYSTEM.										
Removal of aural polypi . . .	3	3	...	...	2	4	...	...	...	...
„ of bone from mastoid . . .	33	18	10	13	17	4	6	1	...	...
Exploration of temporo-sphenoidal lobe . . .	3	4	1	1	...	2	3	...	...	...
„ of cerebellum . . .	1	3	1	...	2	1	...	...	...	...
DEFORMITIES.										
Osteotomy of femur, subtrochanteric . . .	2	1	...	1	1	...	1	...	...	...
„ „ Macewen's . . .	11	2	2	2	5	3	1	...	...	...
Cuneiform osteotomy of femur . . .	3	...	...	1	2	...	...	...	...	...
Osteotomy of tibia and fibula . . .	1	3	2	2	...	...	...	...	...	...

Operations—continued.

Duration of residence after operation.										Result.				Remarks.
Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Mts. +12		C.	R.	U.	D.	
...	2	...	1	...	...	...	...	...	...	1	...	2	...	Exploration of ventricles 1, of cerebellum 1. Mastoid antrum opened 1.
...	...	...	1	...	...	...	...	...	...	1	...	...	...	Previous removal of portion of skull.
...	1	1	...	...	...	...	...	...	...	...	...	2	...	2 For hydrocephalus; tuberculous mass in cerebellum.
...	2	1	...	...	...	...	...	...	...	2	...	1	...	1 Same case; frontal abscess. <i>Vide</i> 'Reports,' 1896.
1	...	...	1	...	...	...	...	...	1	...	1	...	...	Ulnar 1; brachial plexus after resection of clavicle.
...	1	2	...	...	...	...	...	...	2	1	...	...	...	Ulnar 3.
...	...	2	...	2	...	...	...	...	2	2	...	...	...	Ulnar 2; musculo-spiral 1; posterior inter- osseous 1.
...	...	1	...	...	...	...	...	...	1	...	...	...	...	In painful stump.
...	...	1	...	...	...	...	...	...	...	1	...	...	...	Auriculo-temporal.
1	...	...	...	...	...	...	...	...	...	...	...	1	...	1 Aortic aneurysm. <i>Vide</i> Medical Report.
...	...	...	1	...	...	...	...	...	1	...	...	...	...
1	3	2	3	1	1	...	...	...	...	5	...	6	...	
...	...	...	...	1	...	...	...	...	...	1	...	...	...	Inability to leave out tracheotomy tube.
...	1	...	...	...	...	...	...	...	...	...	...	1	...	
...	1	...	...	1	...	...	...	...	...	1	...	1	...	1 Syphilitic stenosis 2. Fatal case: blood in lungs.
5	2	...	...	...	...	...	...	...	5	2	...	...	...	Nasal polypi 1.
3	...	...	...	...	...	...	...	...	2	1	...	...	...
1	3	3	1	...	...	...	...	...	3	5	...	...	...	Through tooth-socket 1.
...	...	...	1	...	...	...	...	...	1	...	...	...	...
...	...	...	2	...	...	...	...	...	...	2	...	...	...	Sclerosis of frontal 2.
1	1	3	14	3	...	...	...	...	18	2	...	2	...	2 Bronchiectasis 1; localised pulmonary gan- grene 1.
...	...	...	1	...	...	...	...	...	1	...	...	...	...	Broncho-pneumonia.
4	2	...	...	...	...	...	...	...	6	...	...	...	...
...	27	14	7	3	...	...	...	...	12	32	1	6	...	Stacke's operation 18; lateral sinus pyæmia 2; temporo-sphenoidal abscess 1; sub- dural abscess 1.
2	1	1	2	1	...	...	...	...	1	1	...	5	...	5 Abscess found in 4; present and not found in 2.
1	2	1	...	...	...	...	...	...	...	3	...	1	...	1 Abscess found in 2; ligature of jugular 1.
...	...	...	1	1	1	...	...	...	2	1	...	...	...
...	...	2	9	2	...	...	...	...	11	2	...	...	...	Genu valgum 12; of tibia and fibula as well 1.
...	...	1	2	...	...	...	...	...	2	1	...	...	...	Ankylosis of knee after excision 2.
...	...	3	1	...	...	...	...	...	4	...	...	...	...	Genu valgum 2; genu varum 1.

TABLE III.—*Surgical*

SURGICAL OPERATIONS.	Sex.		Age.							
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60
DEFORMITIES—<i>continued</i>.										
Osteotomy of tibia	2	...	...	2	...	...	...	...	...	...
„ of metatarsal	1	...	...	1	...	...	...	...	...	...
„ of radius and ulna . . . . .	...	1	...	1	...	...	...	...	...	...
Plastic	4	7	3	1	5	1	...	1	...	...
For Dupuytren's contraction	8	...	...	...	...	...	...	4	4	...
Contracted finger	2	...	...	...	1	1	...	...	...	...
Tenotomy for pes planus . . . . .	...	1	...	...	1	...	...	...	...	...
„ for talipes	4	7	6	3	2	...	...	...	...	...
„ for pes cavus	3	4	...	...	5	2	...	...	...	...
„ for torticollis	4	1	2	...	2	1	...	...	...	...
„ of hamstrings . . . . .	...	1	...	...	...	...	...	1	...	...
„ of extensor of toes . . . . .	...	2	...	...	2	...	...	...	...	...
Phelps's operation	1	...	1	...	...	...	...	...	...	...
Buchanan's operation	3	...	3	...	...	...	...	...	...	...
Excision of head of astragalus	1	...	...	1	...	...	...	...	...	...
Tarsectomy	2	1	2	...	1	...	...	...	...	...
Tarsotomy for pes planus	1	...	...	...	...	1	...	...	...	...
Wrenching for pes planus	2	3	...	...	2	3	...	...	...	...
Deviation of septum of nose	1	4	...	2	2	...	1	...	...	...
Deformity of forehead	1	...	...	...	...	...	1	...	...	...
Ruptured perinæum . . . . .	...	3	...	...	2	1	...	...	...	...
Perforation of palate	1	...	...	...	...	...	1	...	...	...
Avulsion of nail	1	1	...	...	1	1	...	...	...	...
MALFORMATIONS.										
Single harelip	7	3	9	...	1	...	...	...	...	...
Double harelip	2	...	2	...	...	...	...	...	...	...
Cleft palate	7	4	3	2	5	1	...	...	...	...
Extroversion of bladder	1	...	...	1	...	...	...	...	...	...
Epispadias	5	...	...	...	5	...	...	...	...	...
Hypospadias	3	...	1	1	1	...	...	...	...	...
Exomphalos . . . . .	...	1	1	...	...	...	...	...	...	...
Multiple strictures of small gut	1	...	1	...	...	...	...	...	...	...
Imperforate rectum	1	1	2	...	...	...	...	...	...	...
MISCELLANEOUS.										
Trephining and raising of depressed frac- ture of skull	4	...	...	1	...	1	1	...	1	...
Elevation and removal of depressed fracture of skull . . . . .	...	1	...	...	...	...	?	...	...	...
Scraping of sinuses	24	25	6	11	14	9	6	1	1	1
Irrigation and suture of spinal abscess	2	2	...	...	2	1	1	...	...	...
„ and drainage of spinal abscess	10	4	1	3	4	2	1	2	1	...

Operations—continued.

Duration of residence after operation.									Result.				Remarks.
Dys 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Mts. +12	C.	R.	U.	D.	
...	...	...	1	1	...	...	...	...	2	...	...	...	Cuneiform osteotomy of tibia as well 1; double 1.
...	1	...	...	...	...	...	...	...	1	...	...	...	Malunited fracture.
...	1	...	...	...	...	...	...	...	1	...	...	...	Lids 4; fingers 3; arm 1; nose 3; lip 1.
1	4	3	2	1	...	...	...	...	7	4	...	...
3	4	1	...	...	...	...	...	...	8	...	...	...
1	1	...	...	...	...	...	...	...	2	...	...	...	Subcutaneous division of band 1; excision of head of phalanx 1.
...	1	...	...	...	...	...	...	...	1	...	...	...	Peronei.
3	5	2	1	...	...	...	...	...	5	6	...	...	Talipes equino-varus 4; talipes equinus 7.
3	2	...	2	...	...	...	...	...	3	4	...	...	Tendo Achillis and plantar fascia.
...	2	2	1	...	...	...	...	...	5	...	...	...	Myotomy 1. Sterno-mastoid in all.
...	...	1	...	...	...	...	...	...	1	...	...	...	For contracted knee.
...	1	1	...	...	...	...	...	...	1	1	...	...
...	...	1	...	...	...	...	...	...	...	1	...	...	With excision of head of astragalus.
...	1	...	...	1	1	...	...	...	2	1	...	...
...	...	1	...	...	...	...	...	...	...	1	...	...	Talipes equino-varus.
...	...	...	1	...	1	1	...	...	3	...	...	...	Congenital flat foot 2. Same case.
...	1	...	...	...	...	...	...	...	...	1	...	...
...	4	1	...	...	...	...	...	...	...	5	...	...
3	2	...	...	...	...	...	...	...	4	1	...	...	Excision of portion of septum 2.
...	...	1	...	...	...	...	...	...	1	...	...	...	Introduction of platinum plate after frontal sinus disease.
...	...	2	1	...	...	...	...	...	2	1	...	...	Second operation in one case.
...	1	...	...	...	...	...	...	...	...	1	...	...	Suture. Syphilitic.
...	2	...	...	...	...	...	...	...	2	...	...	...	Ingrowing toe-nail.
2	5	2	1	...	...	...	...	...	6	2	...	2	Readmission 1. Fatal: collapse of lung.
1	1	...	...	...	...	...	...	...	2	...	...	...	Removal of supernumerary thumb 1.
...	1	9	1	...	...	...	...	...	5	6	...	...
...	...	...	1	...	...	...	...	...	...	1	...	...	Excision of portion of mucous membrane of bladder.
...	...	...	1	1	1	2	...	...	...	5	...	...	Two cases. Cock's puncture 1.
...	...	3	...	...	...	...	...	...	...	3	...	...
...	1	...	...	...	...	...	...	...	...	...	...	1	Cœliotomy.
1	...	...	...	...	...	...	...	...	...	...	...	1	Enterotomy.
2	...	...	...	...	...	...	...	...	...	...	...	2	Colotomy 2. Exploration of anus 1.
1	...	2	1	...	...	...	...	...	3	...	...	1	Compound depressed fracture of base and vertex 1.
1	...	...	...	...	...	...	...	...	...	...	...	1	Fracture involved base. Laceration of brain.
...	13	11	19	3	2	1	...	...	5	43	...	1	Fatal case. General tuberculosis.
...	1	2	1	...	...	...	...	...	...	4	...	...
...	...	4	4	5	1	...	...	...	...	14	...	...

Operations—continued.

Duration of residence after operation.									Result.				Remarks.
Dys 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Mts. +12	C.	R.	U.	D.	
1	1	...	1	...	...	...	...	...	2	1	...	...	? Anthrax 1.
...	2	...	1	...	...	...	...	...	3	...	...	...	Syphilitic 2.
...	...	2	...	...	...	...	...	...	2	...	...	...	Penis 2.
...	...	5	1	...	...	...	...	...	6	...	...	...
1	7	5	4	...	...	...	...	...	2	15	...	...	Cautery 2.
4	5	11	3	2	..	2	...	...	...	27	...	...	Thiersch grafts 9.
...	12	20	2	5	...	...	...	...	34	5	...	...
...	...	...	...	1	...	...	...	...	1	...	...	...	Panophthalmitis.
12	6	1	...	...	...	...	...	...	19	...	...	...
1	1	...	...	...	...	...	...	...	2	...	...	...	Knee 1, olecranon 1.
...	2	2	...	...	...	...	...	...	4	...	...	...
...	1	...	1	...	...	...	...	...	2	...	...	...
...	2	1	...	...	...	...	...	...	...	3	...	...
									1514	478	10	151	
									2153				

SUMMARY OF DISEASES.

GENERAL DISEASES.

ERYSIPELAS (admitted with the disease).

Males 38, females 33. C. 66, D. 5.

Situation.—Upper extremity 4; lower extremity 7; back 3; chest 1; remainder face and scalp; recurrent 3.

Mode of entrance of micro-organism.—Wounds 6; abscess of buttock 1; ruptured perinæum 1; acne rosacea 1; lupus of face 1; vaccination 3.

Treatment.—Incisions 4; argentic nitrate 1; hot lotions in remainder; anti-streptococcus serum 1; infusion 1.

Fatal cases.

1. H. B—, male, æt. 53. Facial erysipelas. Sore on face 1 week before admission, swelling and redness appeared 5 days later. Admitted with well-marked facial erysipelas. Noisy and restless at night. Temperature averaged 103°. Restlessness and delirium increased; patient became gradually feebler. Death on 3rd day. P.M.—Heart dilated; valves atheromatous but competent. Passive congestion of viscera. Brain hyperæmic with chronic leptomeningitis.

2. R. H—, female, æt. 27. Erysipelas of buttocks and thighs. Confined 5 days before admission; erysipelas appeared next day at margin of ruptured perinæum and spread to buttocks. On admission, patient very feeble, with rapid laboured breathing; well-marked erysipelas of vulva, buttocks, and upper parts of thighs. Much bronchitis. Temp. 102°—105·6°. Rapidly sank, becoming delirious before death. No P.M.

3. J. M—, male, æt. 56. Engine driver. Erysipelas of leg and foot. Ulcer of ankle result of incision for cellulitis 3 months previously. Five days before admission erysipelas started from margin of ulcer. Admitted with well-marked erysipelas of foot and leg, which later on spread upwards. Patient became gradually weaker; low muttering delirium at night. Death on 2nd day. P.M.—Few pleural adhesions. Lungs emphysematous and decomposed. Dilation of left ventricle with subsidiary hypertrophy. Liver fatty. Kidneys large and soft; intense hyperæmia with numerous small hæmorrhages.

4. R. H—, female, æt. 6 weeks. Erysipelas of back and legs. Erysipelas noted 4 days before admission. Admitted with typical erysipelas of back and legs which spread for 4 days, then stopped and patient's condition improved.

Five days later rise of temperature and rash appeared on left arm and spread to neck and head. Child died from exhaustion on 13th day after admission. P.M.—Little collapse at bases of both lungs.

5. G. M—, male, æt. 40. Traveller. Erysipelas of face. Five days before admission, nausea and malaise followed by swelling of right side of face. On examination, well-marked erysipelas of face extending to neck and scalp. Temp. 104°. No abrasion of skin noticed. Erysipelas disappeared from right side of face and spread over left and the upper part of scalp; temperature fell and condition improved. Quinine sulphate, gr. x, given daily. Improvement continued until 11th day, when rigor and appearance of rash on face. Temp. 106°. Erysipelas travelled from right side of face to left and then round head; reappeared on face and then extended again to scalp, neck, and shoulders. Patient became much feebler; quinine had no effect upon fever. 12th day, antistreptococcus serum 10 c.c. injected; rash spreading. 13th day, no effect of serum; rash spreading down back; diarrhœa; hæmatemesis 2 pints; recurred twice later at intervals of an hour. Warm water injected into rectum; returned with large quantity of blood. Morphia given hypodermically. Three pints of saline infusion into median basilic vein. Improvement for half an hour, later unconsciousness; sighing feeble respiration with running pulse. P.M.—Cirrhosis of liver. Further report on post-mortem not available.

Anthrax infection.—Males 2. C. 2. Face 1, neck 1; excision in both. (*Vide 'Lancet,' January 1st, 1898.*)

Acute tetanus.—C. K—, male, æt. 11. Six days ago burn of forearm with spout of kettle; the following day he felt ill, with pain all over him. 2nd day, pains worse, and complained of pain in the back of throat, which caused difficulty in swallowing and inability to open his mouth wide. Later in the day "cramps" in stomach and side, neck and back rigid and stiff "like a statue;" cramps occurred at intervals of five minutes; muscles were rigid between attacks; cramps increased in severity until admission. Has taken fluid in small quantities. Sleeplessness. On examination, pale weakly boy. Abdomen, neck, back, and legs rigid. Mouth can be opened to allow protrusion of tongue, which is furred. Small scab on forearm at site of burn. Mind clear. Has spasms about every 5 minutes, during which he cries out with pain. Chloral and bromide given every 4 hours. Slept a little. Fifty-six spasms between 9 p.m. and 9 a.m. Took fluids fairly well. 2nd day, condition unaltered. Five c.c. of tetanus antitoxin injected into abdominal wall at 10.30 a.m. and again at 4 p.m. Twenty-nine spasms during day; 1 severe with cyanosis. Temp. 98.4°—99.2°; pulse 104—120. Thirty-four spasms during night, less severe. Can open mouth better. 3rd day, 34 spasms during day, 2 severe. Condition much improved. 4th day, antitoxin 8 c.c. at 10 a.m., 7 c.c. at 10 p.m. In the night spasms more frequent (65), 3 of which were severe. Chloroform given with good result. 5th day, not sleeping so well. Antitoxin 10 c.c. and 7 c.c. Chloral increased by 5 grs. Thirty-eight spasms during day; chloroform given during one. 6th day, better; spasms fewer and less severe. 7th day, spasms few and slighter. Takes food well. Antitoxin 14 c.c. in two injections. 8th day, antitoxin 7 c.c. and 8 c.c. Spasms few and very slight. 9th day, spasms continue. Back, neck, and legs still rigid. Rash on abdomen and chest. 12th day, for last 3 days steady improvement, rigidity and spasms less. Antitoxin discon-

tinued. 17th day, occasional spasm in last few days. Moves in bed now. Rigidity gone. Discharged cured on 42nd day.

Fatal cases.

1. W. W—, male, æt. 56. Stableman. Fourteen days before admission some "corns on his left foot broke." Three days ago noticed his neck getting stiff. On admission there is well-marked risus sardonicus; extensor muscles of the neck are rigid and the head is thrown back. Teeth can only be separated a quarter of an inch. There are small ulcers on the under surface of the great and little toes, the result of suppurating corns. On attempting to swallow, violent coughing was induced with cyanosis; his respiration became weaker and weaker and pulse almost imperceptible. Pupils dilated and corneal reflex disappeared. Slowly recovered from attack. Chloroform given in the evening, 10 c.c. of antitoxin were injected, and a nutrient enema administered with 40 grs. each of chloral and bromide. Later, another attempt to swallow induced a violent sneezing fit which utterly exhausted the patient. 2nd day, patient slept well throughout the day. Well-marked opisthotonos. No spasm of glottis. Passed 12 oz. of urine. Bowels not opened. Nutrient enemata and suppositories given alternately; Chloral and Pot. Brom. continued. Ten c.c. of antitoxin injected. 3rd day, condition much worse; pulse and respiration increased; temperature raised. Slept badly during night, frequently waking up breathless. Passed 22 oz. of urine; hot fomentations to abdomen; retention for 24 hours. Chloroform administered and nasal tube passed, when a few ounces of fluid had entered spasm of glottis supervened and feeding had to be discontinued. Vomited. Towards evening masseteric spasm decreased, but attempt to swallow brought it on again. One minim of croton oil given. Respiration now very laboured, with occasional attacks of coughing and sneezing. Expecterated blood-stained mucus. 10 p.m., 10 c.c. of antitoxin injected. Temp. 103°. Unconscious and breathing heavily. Spasm with opisthotonos. At 12 p.m. breathing became much quieter and he died without spasm. No rise of temperature after death. P.M.—Lungs congested and œdematous. Chronic interstitial nephritis.

2. A. M—, male, æt. 14. Two days before admission complained of stiff neck; stiffness increased and he did not sleep at night. Could not eat anything. On examination, the boy is covered with a pustular eruption, the result of scabies. There is a tonic contraction of the muscles of neck and jaw, but the mouth can be opened to a certain extent. Risus sardonicus slightly marked. Temp. 98.4°; pulse 80. Ten c.c. of antitoxin injected into flank. Until midnight patient was comfortable; had a few slight spasms. Took milk easily. 2nd day, castor oil given. Slept well at intervals, having occasional slight spasms, in some of which the tongue was bitten. Took milk well. Bowels acted. At 9 a.m. there was a severe spasm, and later he passed urine into the bed. 10 c.c. of antitoxin injected at 12 a.m. In the afternoon spasms greatly increased in severity, the longest lasting 35 minutes; this spasm occurred shortly after the administration of chloroform. Perspired freely. Chloral and Pot. Brom. were given both by mouth and rectum, but had no influence upon the severity or frequency of the spasms. Accumulation of mucus in the throat, which was expectorated with difficulty. Ten c.c. of antitoxin at 8 p.m. Slept briefly. Œsophageal feeding later. 3rd day, spasms increased in frequency and

severity, becoming practically continuous at midday. Temp. 101.2° ; pulse 120. Obstruction to respiration from collection of mucus in throat. Chloroform given and mouth swabbed out, antitoxin injected. Spasms became less frequent, but patient became rapidly feebler, and died 3 days after the onset of tetanic symptoms. P.M.—No signs of disease, with exception of the lungs, which were cedematous and full of blood.

3. J. F—, male, æt. 23. Labourer. Twelve days before admission piece of timber fell upon him, causing wound of forehead just above right eyebrow. Treated in Casualty Department; bone exposed in one place. Wound treated with antiseptics; healed by first intention. Two days before admission noticed that both eyelids were dropped. In the evening of this day complained of stiffness of right side of face, inability to open mouth, stiff neck, and pains in the chest. On examination well-marked risus sardonicus, head held rigid, complete right facial paralysis, and double ptosis, more extreme on the left side. Mouth could be opened to allow of the protrusion of the tongue for a short distance. Right cheek slightly swollen; boil present just behind angle of jaw. Complains of difficulty of swallowing and of pains in the chest. 2nd day, difficulty of swallowing great, caused by pain and not by muscular spasm; nasal feeding instituted. Temp. 99° . Chloral and Pot. Brom. 10 gr. given every 8 hours. Complains bitterly of pain in abdomen, chest, face, and neck. Transient squint of left eye downwards and inwards, pupils equal and slightly contracted. Morphia gr. $\frac{1}{3}$ given hypodermically. 3rd day, condition practically unaltered. Spasms noticed in muscles of back of neck. 4th day, improvement, spasms less frequent, and pain and restlessness less. Took food by mouth better. Became very restless in evening, spasms of face and neck occurring at rate of 10 an hour. Occasional spasms of extremities. Tongue bitten. Profuse sweating. Temp. 101° . Pulse quickened. Mental condition also altered considerably; he became very depressed and threatened suicide frequently. Morphia gr. $\frac{1}{3}$ given. Spasms worse when asleep. 5th day, restlessness again increased; attempted to jump out of window. Bowels open. Takes food well by mouth. Intense thirst. Chloral and bromide given every 6 hours. Improvement in mental condition at night. Spasms continuing, but being very irregular in occurrence, varying between 6 and 17 in the hour. 6th day, early in morning became restless. Slept after morphia. Spasms became longer and more distinct, involving more muscles. Opisthotonos. Lower limbs drawn up. Right arm extended above head. Pleurosthotonos. Pulse 126. Temp. 102° . Spasms less during afternoon. Restlessness increased at night; morphia given, some relief, but later delirious and very restless. Chloroform given to partial anæsthesia for 4 hours. 7th day, remained quiet after chloroform. Laryngeal spasm early this morning. Cyanosis and rapid respiration. Temp. 104.2° . Spasms of neck increased. Complains of pain in chest. Laryngeal spasm induced by passage of nasal tube; left patient much exhausted; respirations laboured for 15 minutes afterwards. Red rash noticed over back and face. At 1 p.m. great restlessness. Chloroform given. Pulse became very feeble and running; 178 per minute. Cheyne-Stokes respiration. Nasal feeding. Chloroform discontinued. Cheyne-Stokes respiration became more marked, the intervals of apnœa being prolonged. Pulse gradually failed and death followed. Steady rise of temperature in the two days preceding death. P.M.—Body too decomposed to allow any opinion being formed as to condition of organs.

Vide Special Table III for case of tetanus following compound fracture of leg and arising in hospital.

Actinomyces.—Males 1, females 1. C. 1, D. 1. (*Vide* 'St. Thomas's Hospital Reports,' 1896.)

Cancrum oris.—Male 1. D. 1.

Male æt. 3½. Measles 3½ months ago. Three weeks before admission swelling of cheek and offensive breath, gradually increasing. On admission right cheek brawny and œdematous; general condition very poor; rapid pulse and respirations. Cheek slit up by incision from angle of mouth towards ear; gangrenous area on inner surface extending over gum to palate and into the zygomatic fossa; sloughs removed and pure carbolic acid applied. Next day extension of gangrene, which was excised and fuming nitric acid painted on raw surface. Rhonchi and crepitations in lungs. Gradual exhaustion. Death on 2nd day. No P.M.

Carcinomata.

Spheroidal-celled.—*Breast*.—Females 39. C. 29, R. 5, U. 5. Married 25, of whom 12 had borne children. Family history of tumour in 8, of tubercle in 5. History of abscess in 2. Atrophic 3. Shortest history 2 months, longest history 6 years.

Treatment.—Amputation of breast and clearance of axilla 31; amputation of breast alone 1; excision of growth and axilla cleared 1; large part of pectoral removed 1; Thiersch grafts 1; operation not advised 5.

Complications.—Ulceration 1; both breasts affected 1; general dissemination 1.

Recurrent in scar.—Females 8. C. 2, R. 4, U. 2. Interval since operation: 1 month 1, 2 months 1, 7 months 1, 8 months 2, 1 year 1. Treatment: removal 6.

Recurrent in glands.—Females 5. C. 1, R. 4. Interval since operation: 1 month 1, 3 months 1, 6 months 1, 15 months 1, 16 months 1, third recurrence 1. Treatment: removal 5.

Carcinoma of ovary.—Recurrent. Female 1. R. 1. Treatment: cœliotomy for ascites.

Carcinoma of superior maxilla.—1. T. R—, male, æt. 55. Porter. Two years ago epistaxis followed by nasal obstruction; pain in jaw 12 months; 6 months later eyesight in right eye began to fail, followed 3 months before admission by proptosis and bulging of cheek. On examination, right eye and side of face prominent; eye blind; movements of globe impaired in all directions; atrophy of optic disc from pressure. Right half of hard palate depressed. Growth seen in nasal fossa. Nasopharynx free. Enlarged submaxillary gland. Excision of right half of superior maxilla with eye; growth had invaded and destroyed cribriform plate and was involving the dura mater, from which the growth was scraped away. Growth was soft and friable except under orbital plate, where it was hard and fibrous. Anterior wall of antrum destroyed with the orbital plate and nasal wall; through the latter a polypoid growth had grown. Microscopically it was a typical glandular carcinoma. Discharged on 29th day.

2. *Fatal case*.—E. S—, male, æt. 46. Porter. Eight months ago swelling within and discharge from right nostril. Tumour removed from within nose at Portsmouth 3 months before admission, but immediately recurred; 3 weeks

later swelling inside cheek, followed by discharge from upper eyelid and deafness. Loss of sight in right eye 2 days before admission. On examination, right cheek prominent; small, smooth, round swelling just inside meatus of nose. Discharging sinus at inner part of eyelid leading inwards and backwards to ethmoid. Globe displaced downwards, outwards, and forwards. Pupil acts to indirect stimulation; blindness. Pupils equal. Optic disc normal. One week after admission inflammatory swelling of cheek with fever. Upper jaw excised with contents of orbit; roof of orbit scraped; pterygoid plates of sphenoid and upper part of septum nasi removed. Growth soft and friable, whitish in colour, with scattered areas of fatty degeneration. It had originated in the antrum, from whence it had invaded the nose, destroying inner and also the superior and posterior walls of the antral cavity; it extended into the orbit behind the globe, involved pterygoids, body of sphenoid, nasal septum, cribriform plate, and ethmoidal cells, spreading through the last-mentioned to the upper part of the left nasal cavity. Much collapse after operation, death occurring on the 2nd day. P.M.—Base of skull (from within), cribriform plate absent, dura mater over it present but imperfect; ragged opening in right middle fossa at apex, which admitted 2 fingers; dura intact. In sella turcica, to right of middle line, another small opening reaching to dura. Brain: great excess of fluid, turbid, with flakes of lymph; intense injection of cortical vessels. Atheroma of mitral valve. Right lung emphysematous.

Recurrent carcinoma of lachrymal gland.—H. H—, male, æt. 34. Miner. Admitted in July, 1896, for carcinoma of left lachrymal gland of 4 years' duration; growth excised. Recurrence in November, 1896, when contents of orbit removed. (*Vide* 'Reports' for 1896.) Three weeks before admission, *i. e.* 3 months since last operation, aching pain with appearance of nodules in lower margin of left orbit. On examination along lower margin and external angle of orbit are several smooth elastic tumours, some of which are adherent to skin; they encroach considerably upon the floor of the orbit. Nodules with portion of anterior wall of upper jaw with floor of orbit excised; growth found and removed in posterior part of orbit. Upper eyelid sutured to skin wound. Discharge of clear fluid (probably cerebro-spinal) on 2nd day and lasting for 3 weeks. Discharged cured on 34th day.

Carcinoma of thyroid.—A. W—, female, æt. 64. Married. Swelling of neck, size of nut, noticed 7 months ago; steady increase. Alteration of voice and difficulty of deglutition for 1 month before admission. On examination, a tumour, oval in shape, measuring 3 by $1\frac{1}{2}$ inches, situated at lower part of the neck beneath the right sterno-mastoid, firm in consistence and fixed to deeper structures. Moves slightly on deglutition. Tumour removed through incision along anterior border of sterno-mastoid; connected with isthmus of thyroid and extended back between trachea and œsophagus. Encapsuled and shelled out easily; two small accessory growths, size of hazel-nut, also removed. Tumour apparently encapsuled; softish in consistence; on section brownish-red, with numerous minute yellow areas scattered throughout it. Smaller tumours presented a similar appearance. Microscope showed spaces filled with spheroidal epithelial cells, which were invading the tissue between the alveoli. Discharged cured on 18th day.

Carcinoma of neck.—H. L—, male, æt. 57. Bottler. Swelling of neck for 3 months. On examination, hard tumour size of half an orange on left side of neck, with centre 2 inches above sterno-clavicular joint; nodular; involves sterno-mastoid, but not the skin. Moves slightly on deglutition. Tumour excised through a transverse incision, together with several enlarged glands lying along the course of the great vessels; $1\frac{1}{2}$ inches of common carotid and jugular were also removed. Vagus dissected out. Lower and inner part of tumour connected with thyroid, which was the probable seat of origin. Tumour unencapsuled; greyish-white with small yellow areas. One gland breaking down, contained thick dirty brown fluid. Microscope, carcinoma without keratinisation. Little shock, but mental condition impaired after operation. One week later loss of power and sensation over right side noticed; little loss of power in right arm. Mental condition improved. Numerous rhonchi over both lower lobes with crepitations at right base. Wound suppurating. Temperature has been raised; highest point reached 102.4° . Lung condition gradually became worse with increase of fever and feebleness. Death on 18th day after operation. P.M.—Thin layer of lymph over certain areas of lungs. Broncho-pneumonic patches breaking down into abscess; largest cavity size of walnut; much œdema around consolidated areas. In the posterior part of left temporo-sphenoidal lobe the grey and white substance lying between the convolutions divided by the parallel sulcus and the lenticular nucleus was of a greenish colour and much softened. Softened area extended for $1\frac{1}{2}$ inches from surface inwards and from side to side.

Carcinoma of œsophagus.—E. B—, female, æt. 29. Twelve months ago pain and difficulty of swallowing, with swelling of neck. Gradual increase of symptoms. Inability to take solid food for 6 months. On examination, marked emaciation; enlarged glands in neck; thyroid enlarged. Stridor on deep inspiration. Rectal feeding. Death on 4th day. P.M.—At commencement of œsophagus mass of new growth $\frac{3}{4}$ inch in diameter, involving greater part of circumference of gullet, extending into air passage just above cricoid cartilage, but very little into larynx. No ulceration. Growth involved left lobe of thyroid. Lungs wasted and emphysematous. Kidneys atrophic; capsules slightly adherent. Other organs wasted. Microscopically growth was a large spheroidal-celled carcinoma.

Carcinoma of gall-bladder.—S. A. K—, female, æt. 45. Emaciation and anæmia 6 months; swelling in abdomen 6 weeks. No jaundice. On admission, hard, nodular, tender tumour in right side of abdomen extending into iliac fossa and just to left of middle line; can be traced to 1 inch above umbilicus. Median celiotomy. Tumour found connected with liver, covered by omentum and adherent to bowel. Adhesions separated. Aspirated; pus obtained. Incision enlarged transversely, and gauze plugs placed to shut off general peritoneal cavity. Much exhaustion after operation; 2 days later vomiting and distension of abdomen. Died rapidly. P.M.—Tumour size of man's fist, attached by broad flat pedicle to liver and covered on anterior surface by layer of liver substance; closely adherent to transverse colon and duodenum. Normal-looking gall-bladder on ventral surface containing one cholesterine gall-stone size of walnut. On

upper surface incision leads into cavity filled with pus and flocculent débris, and in which are numerous small calculi; a finger passed into cavity impinged upon the large gall-stone. Wall of cavity composed of carcinomatous tissue. Volvulus of sigmoid flexure reduced by two half turns to right; obstruction very severe. Lungs emphysematous. Microscopically the tumour is a spheroidal-celled carcinoma.

Columnar.

Duct carcinoma of breast.—C. P—, female, æt. 35. Married; 2 children. First suffered pain in left breast 10 months before admission; few weeks later noticed tumour which remained stationary for 8 months, then rapid increase in size. Slight occasional discharge from nipple, pale, never blood-stained. Nipple has always been retracted. On examination nipple retracted; tumour size of Tangerine orange, nodular, slightly tender, movable, situated just above the nipple. Skin not adherent. No glands in axilla. Tumour excised with greater portion of breast tissue. Microscope columnar-celled carcinoma.

Carcinoma of pylorus.—Fatal case.—T. S—, male, æt. 49. Boilermaker. Five months ago pain in throat, difficulty of swallowing, and appearance of swelling of neck; 3 months later only able to take fluids. On examination, hard glands in neck, larger on left side. Tenderness on left side of abdomen. Very emaciated and feeble. No vomiting. Can take food by mouth. Patient gradually became weaker until death. P.M.—Growth at pylorus; secondary growths in liver, posterior mediastinal and cervical glands to base of skull. Microscope columnar-celled carcinoma.

Carcinoma of cæcum; cœliotomy; death.—J. E—, female, æt. 38. Cook. Pain in abdomen for 2 months, sharp and shooting; tumour noted at same time. Vomiting for 3 weeks before admission. Bowels regular. On examination, liver enlarged to level of umbilicus; deep in iliac fossa is a hard irregular tumour, very fixed and independent of pelvic organs. Cœliotomy through right rectus at level of umbilicus. Nodules of new growth seen in liver; cæcum and mesentery extensively infiltrated with carcinoma. Vomiting set in after the operation, and patient became rapidly more feeble and died on 2nd day. No distension of abdomen. No P.M.

Carcinoma of splenic flexure; obstruction; lateral anastomosis.—M. H—, male, æt. 62. Traveller. Two months before admission (on Medical side) violent pain at intervals in upper abdomen; gradual increase in frequency and intensity until admission. Occasional vomiting; constipation. On examination, abdomen uniformly distended, slightly tender. No growth felt. Treated by enemata. Condition improved; later relapse. Visible peristalsis in abdomen; constipation with spurious diarrhœa. Vomiting. Readmitted with chronic obstruction, relieved slightly by enemata. Transferred to Surgical side. Median cœliotomy. Ring carcinoma at splenic flexure. Lateral anastomosis with Murphy's button between transverse colon and sigmoid flexure. Bowels acted 5 times on day after operation. Belly less distended; later vomiting and signs of peritonitis. Death on 2nd day. P.M.—Union at junction of anastomosis had given way with extravasation of fæces. General peritonitis. Ring of growth at splenic flexure allowed passage of cedar-wood pencil. No ulceration. Colon hypertrophied. Slight chronic interstitial nephritis.

Carcinoma of sigmoid flexure.—Males 2. U. 2. Treatment *nil*.

Carcinoma of rectum.—Males 11, females 10. C. 4, R. 9, U. 5, D. 3. Duration above 1 year: 2 years 2, 1 year and 8 months 1, 18 months 1. Intussusception 1. Perforation of bowel 1.

Situation.—Distance from anus: at anus 1, 1 inch 3, $1\frac{1}{2}$ inches 1, 2 inches 6, $2\frac{1}{2}$ inches 1, 3 inches 2, $3\frac{1}{2}$ inches 3, "high up" 1; at junction of sigmoid and rectum 2.

Treatment.—Left inguinal colotomy 5; excision 7, including 4 by Kraske's method modified.

Carcinoma of rectum; intussusception; obstruction.—During 3 weeks before admission passed blood *per anum*; no fæces. No vomiting. On admission, abdomen moderately distended and resonant all over. *Per rectum* intussusception felt at distance of 3 inches from anus; taken for carcinoma. Vomited once after admission. Incision in left iliac region for performance of colotomy; large bowel could not be felt; median incision, and then found that the intussusception was firmly adherent and could not be reduced. Right inguinal colotomy by means of Paul's tube. Obstruction relieved. Passage of blood and mucus continued from anus; some fæces passed on 41st day. 46th day, incision backwards towards coccyx; intussusception drawn down; growth found on middle layer just above its junction with the outer. Intussusception and growth removed; lumen of bowel restored by stitches passing through whole thickness of wall. Fæces passed *per rectum* twice during fortnight succeeding operation. Discharge of mucus and blood continued unaltered in amount. Six weeks later margins of opening into the cæcum were pared and sutured; abdominal wall sutured over incision into gut. Much tension. Sutures gave way, and patient in same condition as before operation. Refused further treatment. Discharged on 163rd day.

Fatal cases.—1. Excision by Kraske's method. A. D—, male, æt. 53. Policeman. Constant desire to defæcate during year before admission, with passage of slime and occasionally blood. On examination, circular growth 2 inches from anus, most prominent on posterior and left surface, encroaching considerably upon lumen of bowel. Finger can be passed above mass. Growth firmly fixed behind, but less so in front. Incision from right posterior superior spine to within 1 inch of anus; coccyx and section of right lower edge of sacrum removed. Peritoneum opened and bowel pulled down; divided above and below growth, and cut ends united with interrupted sutures. Large numbers of infected glands removed from sacral hollow. Little shock after operation. Temperature rose to 102° , and remained practically at that level. 3rd day, complained of pain and tenderness in lower abdomen. General condition poor. Increasing weakness and increase of tenderness in abdomen. Death on 5th day after operation. P.M.—Line of suture of rectum had given way in three quarters of circumference. General peritonitis with fæcal-smelling fluid in pelvis. Thickening of aortic and mitral valves. Extreme atheroma of aorta. Recent infarct in spleen. Microscope, columnar-celled carcinoma.

2. A. J. S—, female, æt. 47. Diarrhœa with passage of blood and pus, with occasional vomiting, for two months. Pain in lower abdomen with fever for few days before transference from Medical side. Median cœliotomy; collection of pus and breaking-down growth in pelvis; drainage-tube inserted. Signs of

general peritonitis supervened. Death on 4th day. P.M.—Pelvis filled with thick grumous fluid containing fæces; recent peritonitis of lower half of abdomen. Fungating ulcerating growth $2\frac{1}{2}$ inches long at junction of rectum and sigmoid flexure, which had given way at upper margin. Microscope, columnar-celled carcinoma.

Recurrent carcinoma of rectum.—Male 1, female 1. R. 1, D. 1.

Situation.—Extending from anus 1; $1\frac{1}{2}$ inches from anus 1.

Treatment.—Left inguinal colotomy; Paul's tube.

Fatal case.—A. P—, female, æt. 31. Three months before admission, excision of rectum by Kraske's method. Admitted with stricture thought to be cicatricial. Bougies passed on two occasions; on day following the second passage, pain in abdomen and sickness with failing pulse; later distension of abdomen with rapid breathing. Strength rapidly failed. Death on 9th day after admission. P.M.—Carcinomatous stricture extending $1\frac{3}{4}$ inches from $\frac{1}{2}$ inch above anus. One inch above growth stercoral ulcer, size of threepenny piece, which had perforated. Free air in abdomen; general peritonitis with 3 pints of fluid, chiefly oil and simple enema.

Squamous.

Tongue.—Males 16. C. 7, R. 4, U. 3, D. 2. History of syphilis 3; leucoplakia 2; duration above 1 year 1, 3 years 1; glands involved 7; floor of mouth involved 3.

Treatment.—Partial excision of tongue 7, total excision 1; removal of glands 4; ligature of lingual 1, of external carotid 1, of external carotid and lingual 1; Kocher's operation 1; cheek slit 1; division of jaw 2.

Fatal cases.

1. W. H—, male, æt. 52. Labourer. Six months' history. Foul epitheliomatous ulcer on under surface of tongue involving floor of mouth. Removal of growth with anterior portion of tongue and part of jaw after median division of the latter. Face incision healed by first intention. Tongue surface foul. Difficulty in feeding. Death on 15th day after operation. P.M.—Few bronchopneumonic patches in lower lobes. Few pleural adhesions. Other organs healthy.

2. C. M—, male, æt. 62. Porter. Epitheliomatous ulcer right side of anterior part of tongue. Glycosuria. Excision of right half of tongue after preliminary laryngotomy. Diabetic coma. Infusion 4 times; amount infused in all was 12 pints. No P.M.

Recurrent in tongue.—Males 2. R. 2. Excision 2; after division of cheek 1.

Cheek.—Male 1. U. 1.

Treatment.—Nil.

Glands.—Males 10. C. 1, R. 7, U. 2. Previous epithelioma of tongue 10.

Treatment.—Excision 6.

Floor of mouth.—Males 5. C. 2, R. 2, U. 1. Recurrent 1.

Treatment.—Excision 2; after division of jaw 1; with removal of portion of jaw 1.

Palate.—Males 3. R. 3.

Treatment.—No operations.

Tonsil.—Males 3. R. 1, U. 2.

Treatment.—Tracheotomy 1.

Alveolar border.—Males 4, females 3. C. 2, R. 4, U. 1. Female, same case, recurrence; jaw involved 7; upper jaw 3; lower 4.

Treatment.—Excision with portion of jaw 4; of half lower jaw 1; of upper jaw 1.

Œsophagus.—Males 6, females 2. R. 5, U. 2, D. 1. Upper end 2; 9 inches from teeth 1; 12 inches 1; 15 inches 1; lower end 2.

Treatment.—Gastrostomy 3; tracheotomy 1; glands involved 2.

Fatal case.—E. W—, female, æt. 40. Noticed swelling of neck 6 months before admission. On admission, large fluctuating swelling to right of middle line of neck just below level of cricoid. Swelling incised; pus evacuated and cavity drained. Later, cough with blood-stained expectoration. Discharge continued. Pot. Iod. given. Dyspnœa set in and increased, relieved by tracheotomy 1 month after admission; trachea pushed over to left. One month later sinus explored; found to lead backwards to vertebral column; scraped; examination of tissue removed negative. Abscess in neck opened; communication with œsophagus found. Nasal feeding. Condition improved for a short time, then gradually increasing weakness. Discharge became very offensive. Death on 108th day. P.M.—Vast ulcerating growth had replaced posterior œsophageal wall from level of arytaenoid cartilages downwards for $3\frac{1}{2}$ inches. Growth had given way in many places and communicated with abscess cavity in prævertebral tissues, extending from just below palate to level of manubrium sterni. Larynx and trachea normal, although latter pushed to the left for 1 inch. No glands. Lungs emphysematous. Kidneys slightly granular. Microscope, squamous-celled carcinoma.

Larynx.—Males 2. R. 1, U. 1. Readmission. Tracheotomy 1.

Pharynx.—Male 1. U. 1.

Treatment.—Laryngotomy as preliminary to excision, which was abandoned.

Scrotum.—Male 1. C. 1.

Treatment.—Excision.

Penis.—Males 5. C. 4, R. 1. Glands involved 2. Preceded by warty growth 1.

Treatment.—Excision of growth 1; amputation in front of scrotum 4; glands excised 2.

Uterus, recurrent.—Female 1. R. 1. Involving urethra.

Treatment.—Supra-pubic cystotomy.

Labium.—Females 4. C. 2, R. 1, D. 1. Glands involved 2.

Treatment.—Excision in all.

Fatal case.—E. W—, female, æt. 49. One year before admission, ulcer found just inside right labium majus; increase in size. On examination, ulcerating epithelioma involving labium majus and spreading to buttocks. Glands involved in both groins. Excision of parts involved, including part of rectal and vaginal walls. Much shock. Temperature rose to 104° . Death on 2nd day. P.M.—Liver fatty.

Labium, recurrent.—Female 1. R. 1.

Treatment.—Excision.

Bladder.—Male 1, female 1. R. 1, D. 1. Papillomatous surface 1.

Treatment.—Supra-pubic cystotomy and removal of growth 2; recurrence in male case later.

Fatal case.—A. M—, female, æt. 59. Widow. Mother died of cancer of the mouth. Passage of blood in urine at intervals, with pain and discomfort in the urethra for 6 months. Blood at end of micturition, increased by exercise. Increased frequency, more by day. Digital exploration of bladder revealed carcinomatous ulcer size of half a crown above and to left of orifice of left ureter. Operation, supra-pubic cystotomy and removal of growth. Bladder drained. Cystitis supervened, not relieved by irrigation. Irregular fever. Patient's condition gradually became worse. Noisy delirium. Dry tongue. Feeble pulse. Bedsores. Death on 49th day. Microscope of growth, epithelioma. P.M.—Recurrence of growth in bladder at site of cicatrix of removal. Two pelvic abscesses, one near sacrum, the other at left side of pelvis in pelvic connective tissue. Left kidney, numerous minute peripheral infarcts with two very small abscesses. Liver fatty.

Kidney.—Male 1. D. 1. (*Vide* Special Table III, "Pyæmia.")

Hand.—Male 1. C. 1.

Treatment.—Amputation of metacarpal.

Sacrum.—Female 1. R. 1. Rapid recurrence after each operation (5 in all). Epithelioma supervened upon ulcer, the result of old bed sore.

Treatment.—Excision on five occasions; grafting 1.

Index finger.—A. H—, female, æt. 53. A black speck appeared under nail of left index finger 8 years ago; the top of the finger become tender and painful, with a watery discharge from beneath nail. Condition unchanged for $7\frac{1}{2}$ years. Eight months before admission, increase of pain. Five months later, swelling with rapid increase and ulceration. On examination, swelling size of bantam's egg involving distal half of left index finger, ulcerated on surface and intensely tender. Remnant of nail present. Axillary glands not involved. Amputated through first phalanx. Microscope showed squamous-celled carcinoma, probably arising in matrix of nail. (*Vide* Museum for specimen.)

Leg.—Male 1. C. 1. Supervened upon chronic ulcer.

Treatment.—Amputation of thigh, lower third.

Heel.—Male 1. C. 1. Amputation of leg in upper third.

Rodent ulcer.—Males 6, females 3. C. 6, R. 3. Cheek 5; nose 1; ear 1; inner canthus 1; forehead 1; partial ankylosis of jaw 1.

Duration in years.— $\frac{1}{3}$, $1\frac{5}{6}$, 3, 4, 4, 5, 7, 11, 20.

Treatment.—Excision 8; with removal of malar and condyle of jaw 1; grafted 2; plastic 1.

Rodent ulcer, recurrent.—Males 3, females 3. C. 3, R. 3. Removal 6 years, 2 years, 1 year, 3 months, and 1 month previously 1; 6 months previously 1; 12 months 1.

Treatment.—Excision 5.

Sarcoma.

Large round-celled sarcoma of testicle.—W. W—, æt. 37. Carman. Family

history good. Two years before admission fell across pole of van, injuring right testicle. Testicle then swollen; swelling disappeared, but since then pain locally and in lumbar region, severe at times. One year later swelling re-appeared, with gradual increase until 6 weeks before admission, when rapid increase accompanied by pain and tenderness. On examination swelling of testicle, apparently chiefly in epididymis, nodular; body of testicle also hard, large, and tense. Skin normal. Vas normal in size but tender; ? enlargement of right vesiculæ seminales. Swelling subsided somewhat by rest in bed. Thrombosis of both femoral veins. Castration. Testicle uniformly enlarged, greyish with numerous yellow caseating areas closely resembling gummata. Epididymis and cord normal. Microscope shows large round-celled sarcoma. Discharged 66th day. Readmitted later on Medical side with recurrence in abdomen.

Sarcoma of breast.—1. S. F—, female, æt. 56. Married. Children 11, miscarriages 3. Family history good. Small lump noticed in breast 5 months before admission; gradual increase in size, with some pain. Blow on breast shortly before appearance of tumour. Large hard tumour in upper outer quadrant of left breast. Tumour infiltrated breast substance; skin adherent. Axillary glands enlarged and hard, cords running to them from breast. Amputation with clearance of axilla. Growth somewhat soft, whitish yellow, with small areas of fatty degeneration. Microscope, round-celled sarcoma. Discharged 21st day.

2. M. C—, female, æt. 65. Married. Nullipara. Family history good. Tumour of right breast, ? nature, removed at age of 35. Has had a lump in breast for 20 years; painful at times, and has become smaller under treatment. Retraction of nipple for 15 years. Discharge from nipple 12 years ago, lasting for 1 year; brown in colour and not profuse. Rapid increase in size of swelling of breast for 1 month before admission. On examination, large circular swelling in left breast situated mainly to inner side of nipple. Tumour in greater part of extent firm, fluctuating area at most prominent point just internal to nipple. Skin involved; red and hot, with distended veins. Nipple greatly retracted. Axillary glands not palpable. Amputation of breast and clearance of axilla. Tumour after removal, size of large orange with cyst size of hen's egg, containing dark blood-stained fluid and lined with glairy material. Growth soft, friable, and infiltrating. Microscope, mixed-celled sarcoma.

3. S. S—, female, æt. 46. Married. Children 10, miscarriages 4. Injury to breast 7 months ago, 1 month later tumour noticed; rapid increase in size and involvement of skin. For 2 months before admission occasional discharge from nipple, clear and straw-coloured. On examination, large globular tumour in left breast involving nipple; area of ulceration size of halfpenny at outer margin of growth. Tumour elastic, with hard margins invading breast substance. Veins over breast enlarged. Axillary glands not palpable. Amputation of breast and clearance of axilla; axillary glands found enlarged. Microscope, spindle-celled sarcoma.

Spindle-celled sarcoma of back.—J. H—, male, æt. 60. Lipoma of back removed 1 year before admission; 5 months later small lump noticed in situation of former growth the size of a bean. Very rapid growth, ulceration with occasional hæmorrhage. On examination, oval tumour, 5 by 3½ inches, just to left of

middle line of back in upper dorsal region. Fungating mass at summit of tumour. Skin adherent and purplish. Several purplish spots around tumour, but no evidence of growth in these areas. Growth excised and raw surface afterwards grafted. Microscope, spindle-celled sarcoma.

Traumatic central sarcoma of radius.—L. L—, female, æt. 34. Family history good. Eighteen months previously fell and broke her left forearm at lower end. ? Colles's fracture. Treated by splints for 1 month. On removal of splints there was a large swelling over lower end of radius which has remained stationary until 8 weeks before admission, when she suffered pain and found that the swelling had slightly increased, and that her left hand was weaker and wasting. On examination, swelling involving lower third of radius, rising abruptly from the bone and measuring 2 inches in length. Swelling hard. No definite eggshell crackling, but on firm pressure being applied there is a distinct rebound, giving exactly the same sensation as if pressure were made upon a bandbox. Movements of wrist impaired. Muscles of thumb wasted and grasp of hand weak. Skiagram showed extremely well that the whole circumference of the bone was expanded by growth. Operation refused.

Periosteal sarcoma of radius; resection.—M. D—, female, æt. 32. Family history good. Ten months previously patient noticed stiffness in left forearm and found a swelling the size of a hen's egg; this has remained stationary. On admission, hard elastic swelling size of hen's egg situated at junction of upper and middle third of radius and attached to its outer and posterior surface. No eggshell crackling or pulsation. Skin not adherent. Tumour exposed; found to be encapsuled. Radius divided at the middle of its length, upper end disarticulated and growth removed. Discharged cured on 23rd day.

Spindle-celled sarcoma of leg.—J. N—, female, æt. 9. At age of 3 months, tumour removed from leg. Swelling noticed in upper part of leg 4 years before admission; one month later a second swelling appeared directly above the former one. After an accident the upper swelling began to discharge and has continued to do so since. On examination, two swellings on the inner side of the tibia, one situated just above the other at the upper end of the bone. The upper tumour is the size of a Tangerine orange, with a narrower base at its attachment to the leg, being somewhat pedunculated. Surface vascular; vascularity fading off gradually towards the base. Ulcerated area on lower part of growth. Moveable over deeper structures, but skin involved; $1\frac{1}{2}$ inches below is a somewhat similar tumour, pyriform, with the base free, softish and nodular upon the surface; it is more fixed than the preceding tumour. Scattered around the upper tumour are four much smaller tumours. Tumours excised and raw surface covered with Thiersch grafts. Microscope showed spindle-celled sarcoma with areas of myxomatous tissue.

Fatal cases.

Sarcoma of femur; spontaneous fracture.—C. A. S—, male, æt. 60. Iron-plate worker. Admitted in January for enlarged prostate. Complained of pain in right testicle shooting upwards towards the kidney and down the thigh. Relieved by rest. Pain increased after discharge, and he was readmitted in May. Has had hæmaturia. On readmission complained of pain in right lumbar region, radiating down back of thigh and leg to foot, also to testicle.

Pain always present, dull and aching, with exacerbations at intervals; increased by exercise and by movement of hip-joint. Swelling felt at upper part of thigh, fixed to bone and indefinite. Circumference of thigh increased by 5 inches. Increase of swelling. Spontaneous fracture occurred on 10th day with much increase of pain. Treated with long outside splint and extension. Patient became gradually weaker. Suppression of urine. Death on 57th day. P.M.—Upper half of right femur surrounded by growth. Bone much thickened; fracture through neck of femur. Growth had extended to pelvis, invading prostate and neighbouring parts. Left ureter dilated with hydronephrosis. Cystitis. Other organs healthy.

Sarcoma of ilium; dissemination of growth.—J. P—, female, æt. 35. Governess. Shooting pains down left thigh 4 months before admission. Abdominal tumour discovered some time later. Pain changed character in last 3 weeks, dull and continuous; pins-and-needles in leg, with œdema. On examination, much emaciation. Abdominal veins dilated. Tumour extending from Poupart's ligament to within 2 inches of umbilicus and well into the flank; fluctuation obtained. Fluctuating swelling in buttock presenting at sciatic notch. Edema of both lower extremities, much more marked in left. Gradually increasing weakness with great pain. Death on 12th day. P.M.—Left iliac fossa filled with soft breaking-down growth, extending into true pelvis and passing out through sciatic and obturator foramina, rising out of pelvis and surrounding aorta. Left common iliac vein invaded and destroyed. Ovarian cyst on left side pushed up against anterior abdominal wall. Nodules of secondary growth in liver. Multiple cholesterine gall-stones. Anterior mediastinal glands affected. Early hydronephrosis. Numerous very small nodules of growth in lung.

Sarcoma of thyroid.—M. F—, female, æt. 67. Difficulty in swallowing and alteration of voice for 6 weeks, with gradual increase in severity of symptoms. Occasional attacks of dyspnœa. Tumour of neck noticed 3 weeks. On examination, tumour on left side of neck; fixed; no movement on deglutition. Trachea pushed over to right of middle line. Marked inspiratory and expiratory stridor. Paralysis of left vocal cord. Tracheotomy. Dyspnœic attacks persisted after operation. Respiration became rapid and laboured. Death on 7th day. P.M.—Large hard mass on left side of neck, fairly definitely encapsuled, pressing upon trachea and œsophagus. Slight atheroma of root of aorta. Bronchitis, with islets of broncho-pneumonia. Chronic interstitial nephritis. Microscope, round-celled sarcoma.

Lympho-sarcoma of tonsil.—S. A. A—, female, æt. 22. Swelling in pharynx, with alteration of voice, began 1 year before admission. Rapid increase in size. Difficulty in swallowing. Swelling in neck noticed 10 days. On examination, mouth nearly filled by tumour with sloughy surface, involving tonsil, extending to roof and floor of mouth and involving the gum over the lower jaw. Uvula pushed over to right. Enlarged glands in submaxillary region. Difficulty of respiration at night. Operation; chloroform given, increase of dyspnœa necessitating laryngotomy. External carotid ligatured; glands removed; division of mandible with excision of growth. Secondary hæmorrhage 11 hours after operation, caused by slipping of ligature on carotid. Common carotid tied. Infusion

of $1\frac{1}{2}$ pints of saline. Patient never rallied from the operation; cough and laboured respiration supervened. Temperature rose to $104\cdot8^{\circ}$ before and $108\cdot2^{\circ}$ after death. P.M.—Cavity from which growth removed sloughy. Right lung, lower lobe congested and œdematous; much broncho-pneumonia (septic); abscess abutting on pleural surface at base. Scattered broncho-pneumonic patches in left lower lobe. Brain normal. Microscope, lympho-sarcoma.

Sarcoma of tonsil.—L. H—, female, æt. 9. Swelling of left tonsil noticed 4 weeks. On admission, smooth globular enlargement of tonsil. Examination under anæsthetic showed growth had extended to base of skull. Growth rapidly increased, causing interference with respiration. Tracheotomy. Gradual exhaustion. Profuse offensive discharge from mouth; growth appeared at inner angle of eye. Death on 49th day. P.M.—Fauces filled with soft growth, which extended into mouth, nasal cavity to base of skull, into antrum, and also invaded lower jaw. No secondary growths. Few tuberculous nodules in lungs. Caseous mesenteric gland.

SIMPLE TUMOURS.

Fibroma of toe.—G. B—, male, æt. 3. Red pimple noticed 5 weeks before admission. Gradual increase in size. On examination, on the dorsal aspect of second phalanx of third toe is an oval tumour with the long axis transverse and measuring 1 inch, and $\frac{1}{2}$ inch from before backwards and $\frac{1}{4}$ inch in depth. It is pale pink, very hard; skin firmly adherent; fixed to bone. Amputation at metatarso-phalangeal joint. On section tumour firm and whitish with reticulated appearance; springing from the periosteum. Microscope showed a firm fibroma. (*Vide Museum for specimen*.)

Naso-pharyngeal fibroma.—A. S—, male, æt. 16. Apprentice. Nasal obstruction on left side for 6 months; discharge from nostrils for few days; partial removal. Offensive smell noticed by patient. On examination left nostril filled with sloughing mass with offensive discharge. Soft palate depressed. Digital examination of naso-pharynx revealed firm rounded mass springing from the roof of the cavity. Preliminary laryngotomy. Incision round nose on left side from angle of eye to median line of lip. Soft palate divided. Growth removed with snare through nose. No excessive hæmorrhage. Suture of palate. Microscope, œdematous fibroma. Discharged cured on 28th day.

Adenoma of palate.—B. S—, female, æt. 41. Small swelling noticed on palate 6 months before admission. Gradual increase. On examination rounded swelling at posterior part of right side of hard palate, firm, with mucous membrane stretched over it. Moveable over deeper structures. Tumour easily shelled out. Microscope showed alveoli lined with glandular epithelium.

Adenoma of back.—C. S—, male, æt. 73. Dealer. Noticed a swelling in his back 3 months before admission. Hæmorrhage and later discharge. Increase of size. Axillary glands enlarged for 3 weeks. On examination, black flattened fungating tumour, occupying an area the size of a four-shilling piece, situated at the angle of the left scapula. Skin thinned and adherent, but not infiltrated. Inflammatory enlargement of axillary glands. Pus evacuated from axilla.

Tumour excised later. Microscope showed spaces lined with cubical epithelium; proliferation of the cells in some alveoli had occurred, forming papillomatous masses projecting into the lumen. An adenoma of a sebaceous gland.

Intermuscular lymphangioma of thigh.—K. H—, female, æt. 15. Swelling noticed above and to outside of patella 11 years ago. No marked increase of size. Occasional shooting pain, increased by walking and also during the last few months. On admission ill-defined swelling, soft, situated above and to the outer side of the right patella, deep to the vastus externus. Slight tenderness on palpation. During residence in hospital tumour increased to double its original size and became much more defined. Increased heat and tenderness with slight fever. Symptoms relieved by rest. Operation thought to be inadvisable. Discharged 44th day.

Nasal polypi.—N. B—, female, æt. 30. Servant. Has had nasal polypi for 2 years. Several previous removals of polypi in hospital. Several large polypi present in right nasal cavity springing from middle turbinated bone. Few polypi on left side. Polypi removed under chloroform, together with the middle turbinated bones, by forceps. 2nd day, rigor with temperature of 104°. Head-ache. Vomited slightly. No squint or muscular twitchings. Head retracted. Temperature remained high, 103° to 104·4°. Gradually increasing coma, beginning 7 hours before death, which occurred at end of 2nd day after operation. P.M.—Brain bathed in thin fluid pus. No lymph. No lesion of dura over ethmoid bone. Pathologist considered that infection had taken place either through lymphatics or blood-vessels. Bone intact in nasal cavity, but mucous membrane swollen and covered by layer of blood-clot.

CYSTS.

Hydatid.

Hydatid of pelvis pressing upon urethra; retention.—W. G—, male, æt. 30. Police sergeant. Has been on foreign service in the army. Gleet 13 years previously. Three months before admission micturition was interfered with at intervals. Four days ago retention; attempt to pass catheter failed; passed little bloody urine on the following day. Catheter passed and tied in for 24 hours; retention followed removal, and catheter could not be replaced. On admission bladder distended nearly to umbilicus; false passage; catheterism impossible. Supra-pubic cystotomy. On passing the finger into the bladder, a smooth, rounded, tense swelling was felt situated between the rectum and bladder, pushing the posterior wall of the latter forwards. Aspiration of swelling through posterior wall of bladder. Eighteen ounces of clear limpid fluid withdrawn. Microscopical examination of the deposit showed numerous hydatid hooklets and scolices. Tube placed in supra-pubic opening and silver catheter tied in. Temperature raised after operation. Cystitis. Rectal examination at intervals revealed no filling of cyst until 39th day, when patient was examined under an anæsthetic with a finger in both rectum and bladder. Perinæum incised towards the anus and rectum pushed to one side; cyst tapped and opening enlarged, allowing escape

of foetid pus; cavity drained. Cystitis improved. Fever gradually disappeared. Supra-pubic opening closing. Pus from cyst became more offensive. Passed urine *per urethram* on 47th day. Hydatid cyst wall removed from cavity on 54th day, with a quantity of very offensive pus. Sinus in perinæum nearly closed on 91st day. Temperature normal since removal of cyst wall. 93rd day, rise of temperature to 103° ; sinus dilated, allowing escape of small quantity of pus with relief of fever. Supra-pubic opening closed on 88th day and sinus scraped. Discharged on 128th day with small sinus in perinæum.

Fatal case.—J. B—, male, æt. 47. Seaman. Seven years ago severe attacks of abdominal pain at intervals extending over 3 years. Swelling in epigastrium noticed 6 years ago; has remained stationary. Jaundice 6 months. Constipation. Frequent micturition. On admission on Medical side, intense jaundice. Tumour in subcostal angle extending 4 inches below xiphoid, consisting of two large bosses, hard, irregular, and descending on inspiration; apparently connected with liver. Resonant. Liver dulness begins at 4th rib and extends to level of umbilicus. Edge felt. Numerous small rounded tumours are felt just beneath abdominal wall. Doubtful hydatid thrill obtained. Urine contained bile pigments; stools stone coloured. Transferred to Surgical side. Condition unaltered. Incision through right rectus above umbilicus. Hydatid cyst size of orange removed from great omentum with another smaller one. Large cyst felt beneath liver; could not be enucleated; peritoneum sutured to cyst. Aspiration followed by incision; numerous daughter-cysts and hydatid membrane removed. Cyst drained. After operation jaundice gradually diminished; bile pigments in urine became less and stools became coloured. Discharge of daughter-cysts and pus on 10th day after operation. Abdominal pain on 27th day. 56th day, discharge of bile-stained pus and mucus; pain in lower abdomen. Temperature raised since operation; gradually declined to 50th day, when rose to 104.2° . 65th day, pain in chest; bile-stained expectoration. 66th day, aspiration of pleura over right base; negative result. Temp. 103° ; cough and expectoration worse. Abdomen rigid; discharge from abdominal wound very slight. 68th day, patient feebler; resonance absent over lower two thirds of right lung behind; respiration rapid. Aspiration under chloroform with negative results. Somewhat relieved on following day. Expectoration no longer bile stained. 72nd day, great increase of pain in chest. Expectoration became bile stained. 77th day, condition much worse. Absolute dulness over right lung; bulging over lower intercostal spaces. Respiration rapid and confined to left chest. Temperature of hectic type. 80th day, no change in patient's condition with exception of increased feebleness. Aspiration of thorax withdrew 82 ounces of pus; patient died during the operation. P.M.—Right empyema containing $1\frac{1}{2}$ pints of pus. Adhesions between lower diaphragm and anterior abdominal wall. Liver enormously enlarged and contained a great number of hydatid cysts of various sizes, some suppurating, others containing clear fluid with daughter cysts. One suppurating cyst had ruptured into pleura. Right lung partly adherent to diaphragm. Numbers of cysts in mesentery, varying in size between a Tangerine and an ordinary orange. Most of them were thick walled; some contained fluid and daughter-cysts, others layers of membrane, and some few were suppurating; they reached as far as the pelvis, to which the lower ones were adherent. Superficial hydatids on kidneys

and spleen. Left ventricle hypertrophied and dilated. Right lower lobe of lung consolidated and collapsed. Both lungs congested and œdematous.

Blood-cyst of thigh.—J. E—, male, æt. 25. Coal porter. Small tumour size of marble noticed 3 months before admission; has since increased. On examination, conical-shaped swelling on inner surface of left thigh at its upper third. Base 2 inches in diameter, uniform in consistence, and apparently adherent to muscles. The apex of the swelling is soft and red. Glands palpable in groin, but not obviously enlarged. Tumour excised. It consisted of a thin-walled cyst containing blood. There was no sarcomatous tissue in the wall.

Ovarian cysts.—Females 6. C. 4, U. 1, D. 1. Double 1; cyst of broad ligament as well 1; multilocular in 5; dermoid 1.

Treatment.—Ovariectomy 5, "at own request" 1.

Fatal case.—A. W—, female, æt. 53. Housekeeper. Swelling of abdomen noticed 5 months before admission. Emaciation. Œdema of legs. Tapped twice before admission; 3 and 2 gallons respectively removed. On examination, tumour cystic; hard, irregular mass fell to left of cyst. Cœliotomy on 2nd day. Cyst gave way during removal; blood-stained fluid escaped. Large multilocular cyst removed from left side. On right side another cyst firmly attached below and to ruptured cyst; incision and drainage. Papillomatous growth in great omentum and surface of intestines studded with small granulations. Patient never recovered from shock of operation. Temp. 101° to 102°. Vomiting. Death on 4th day. P.M.—Chronic peritonitis; all the intestines studded with small nodules of growth. Omentum puckered up and thickened. Perihepatitis with early nutmeg change. Early interstitial nephritis. Microscope showed growth in omentum to be a carcinoma.

Parovarian cyst.—E. J. S—, female, æt. 44. Seamstress. Gradual enlargement of the abdomen for 7 years. On examination, flaccid cyst filling nearly the whole abdomen; greatest girth 56½ inches. Cœliotomy. Cyst tapped and 48 pints 6 ounces of fluid slowly withdrawn. Pedicle ligatured and cyst removed; arose from right side. Cystic left ovary removed. Discharged cured 47th day. (*Vide* Museum for cyst.)

Tumours, nature undetermined.

Malignant growth of base of skull.—J. W. C—, male, æt. 43. Boilermaker. Three months before admission, sore throat lasting 1 week; indefinite symptoms referred to throat until 14 days before admission, when difficulty of swallowing and pain on right side of neck were noticed. Swelling of left side of neck 7 weeks, of right side 5 weeks. Loss of voice and deafness 10 days. On examination, numerous hard enlarged glands in neck. Left tonsil red, swollen, and pushed over beyond middle line. Complete paralysis of left vocal cord. Difficulty of swallowing; œsophageal bougie not obstructed. Pain over left temple. 14th day, glands larger; firm rounded swelling to be made out in left tonsil and behind it. Ulcer situated behind tonsil, apparently not malignant. Tongue deviates to the left. Pain increased. Cough and expectoration of thin watery fluid. 24th day, above symptoms all increased; left pupil smaller than right; acts well. No proptosis or optic neuritis. Palate depressed on left side by soft swelling springing from lateral wall of nasopharynx. Discharged on 26th day.

? *Growth of upper end of humerus.*—H. S—, male, æt. 41. Casemaker. Fall on to arm, throwing his weight on to shoulder, 15 weeks before admission. No pain at time of accident, but stiffness of shoulder noted the following morning. Treated by liniment and passive movement, but no improvement in movements of shoulder. His arm has been getting gradually larger. On admission hard firm swelling of upper end of humerus, mainly situated in front and involving the head of the bone. One and a half inches increase in circumference of shoulder. Movement at shoulder-joint practically *nil*. Skiagram showed enlargement and indistinct outline of head of bone. Treated with Pot. Iod. Slight decrease of swelling and increased mobility of shoulder. Discharged at own request.

Abdominal tumour.—J. B—, female, æt. 29. Married. Swelling noticed in left side of abdomen 9 months before admission and 14 days after confinement. Said to “come and go.” Disappearance for 3 months. Pain when tumour present. Three days before admission swelling reappeared with great pain. No urinary or intestinal symptoms beyond constipation. On examination, ill-defined tender swelling on left side of abdomen just above the crest of the ilium; fixed; no notches to be felt; no fulness in lumbar region. Bowel resonance can be obtained behind the tumour. Uterus small and anteflexed; no connection of tumour with pelvic organs. Urine normal. Blood-count normal. Cœliotomy in left semilunar line. Colon superficial to tumour, which presented a malignant appearance and felt cystic; only blood withdrawn after puncture with trocar and cannula. Left kidney appeared normal. Swelling extended upwards beneath costal margin, and was firmly fixed to posterior abdominal wall. Spleen could not be felt. No attempt at removal. Discharged on 54th day. Later examination showed that the swelling almost completely disappeared.

DIGESTIVE SYSTEM.

Tooth-plate in œsophagus; œsophagotomy.—A. J. B—, male, æt. 48. Civil servant. Swallowed tooth-plate during sleep; sensation of foreign body in throat; slight difficulty in respiration. Skiagram showed tooth-plate at level of cricoid cartilage; best seen from side and from behind. Attempt to extract foreign body from mouth failed; œsophagotomy performed; tooth-plate impacted in œsophagus; removed through half-inch incision; it carried 4 teeth, and measured 2 inches in diameter and $\frac{7}{8}$ inch transversely at insertion of teeth. Rectal feeding for 3 days. Milk escaped from wound on 5th and 6th days. Discharged cured on 27th day.

Hernia.

Reducible inguinal.—Males 131, females 25. C. 148, R. 4, U. 4. Congenital 15; funicular 2; recurrent 10; double 10; tuberculous peritonitis 1; perinæal ectopia testis 1.

Treatment.—Kocher's operation 35; Bassini's 5; Macewen's 3; Halstead's 2; ablation of sac with suture of pillars 89; ablation of sac 10; pillars only sewn 4; nature of operation doubtful 1; refused operation 2; truss 2.

Irreducible inguinal.—Males 11. C. 8, R. 3. Congenital 3; hernia of cæcum 1.

Treatment.—Kocher's operation 2; ablation of sac and suture of pillars 4; sac only ablated 2; suture of ring only 1; hot bath and icebag 2. In 1 case appendix in midst of matted omentum; appendectomy.

Reducible femoral.—Females 8. C. 5, R. 2, D. 1.

Treatment.—Ablation of sac 1; ablation of sac and pectineal flap 2; ablation of sac and suture of ring 1; suture of ring 1; Kocher 1; operation ? 1; formation of fæcal fistula 1, which afterwards closed.

Fatal case.—M. G—, female, æt. 70. Radical cure. (*Vide* Special Table III.)

Irreducible femoral.—Male 1, females 5. C. 5, R. 1. Recurrent 2; ulceration of skin 1.

Treatment.—Kocher's operation 1; ablation of sac 2; ablation of sac with fascial flap 1; ablation of sac with flap from external oblique 1.

Irreducible umbilical.—Male 1, females 3. C. 2, R. 1, U. 1. Inflamed 2; ablation of sac and suture of fascia 2; truss 1; refused operation 1.

Reducible ventral.—Males 2, females 2. C. 2, R. 1, U. 1.

Treatment.—Ablation of sac and suture of fascia 2; pad and bandage 1; refused operation 1; previous cœliotomy 2.

For "Strangulated herniæ" see Special Table I.

Acute appendicitis.—Male 1, females 3. C. 2, D. 2. Abscess in fossa 2; retro-peritoneal 1; recurrent abscess 1.

Treatment.—Incision of abscess 2; cœliotomy and irrigation 2.

Fatal cases.

1. L. F—, female, æt. 10. Pain and tenderness in abdomen, with sickness and constipation 6 days. On admission, distended and rigid abdomen; dulness in right iliac fossa and shifting dulness in flanks. Pinched features. Median cœliotomy; general peritonitis. Irrigation with sterilised water; drainage of pelvis; some improvement after operation. Irrigation repeated on 3rd day, but death few hours later. Temperature high after operation. P.M.—General adhesive peritonitis with pus in dependent parts. Appendix lying down and out; perforation near tip; distal portion of appendix shut off from rest of organ by stricture. Proximal portion healthy.

2. W. F—, male, 63, shipbroker. Pain in abdomen, ? days. Admitted with rigid and distended abdomen; abdominal facies. Cœliotomy and irrigation. Appendix perforated and gangrenous. Death on 2nd day. No P.M.

Chronic appendicitis.—Males 13, females 5. C. 17, U. 1. Interval after 1st attack 8; 2nd attack 2; 3rd attack 2; 4th attack 2; 5th attack 1; 7th attack 1; many attacks 2.

Treatment.—Appendectomy 17. Incision adopted: McBurney's 12; rectus sheath 2; semilunar line 3. Appendix showed old perforation in 3; catarrhal inflammation 13; old ulceration 1; ovariectomy in 1 case. General peritonitis after operation 1 with recovery.

Perforated gastric ulcer.—D. D—, male, æt. 41. Gardener. Two years ago progressive emaciation with vomiting. Vomit in large quantities. Treated by lavage of stomach for a year and cured. Two days before admission, nausea

relieved by lavage of stomach; awoke in night with great abdominal pain and nausea; he again washed out his stomach. Pain continued with retching. Tenderness of abdomen most marked in right iliac region; abdomen moved slightly with respiration. Pain increased by swallowing hot water; referred to epigastrium. No collapse. On examination abdomen distended and tender; shifting dullness in flanks. No tumour. Pulse feeble and running. Pinched features. Cœliotomy in right semilunar line; localised abscess found containing faecal pus. Adhesions. Abscess drained. Death on 2nd day. No P.M.

Intussusception.—Fatal case.—C. J—, male, æt. 4 months. Screaming and persistent vomiting day before admission. No passage of blood or mucus. Collapse. Feeble running pulse. Rigid abdomen. Sausage-shaped tumour in upper part of abdomen. Cœliotomy and reduction without much difficulty. Shock after operation, followed by fever. Vomiting. Increased feebleness. Restlessness. Death on 2nd day. P.M.—Localised peritonitis in right iliac region. Cæcum and ascending colon deeply congested and swollen for 3 inches.

Acute gastric dilatation.—(*Vide* Clinical Society's 'Transactions,' vol. xxxi.)

Fibrous stricture of large intestine.—R. G—, male, æt. 21. Labourer. Five years ago appendicitic abscess opened; sinus persistent for 2 years, then closed by operation. Three days before admission severe pain in right iliac region; vomiting. Diarrhœa with offensive stools. Abdomen distended and rigid. Small tender lump felt in right iliac fossa. Shifting dullness in flanks. Pulse quick and small. Tongue dry and furred. Anxious expression. Cœliotomy in right semilunar line. Omentum adherent to abdominal wall. Distended small gut led to cæcum where thickening felt. Hypertrophy of bowel. Incision in small bowel and evacuation of contents. Stricture felt at junction of cæcum and colon. Longitudinal incision over stricture; sutured transversely with Lembert's sutures. Peritoneal cavity drained. Operation lasted 2 hours; little shock. Signs of peritonitis on 2nd day after operation. Death on 3rd day. P.M.—Adhesive peritonitis in right iliac fossa. Stricture at junction of cæcum and colon had been relieved by operation. Slight leakage from line of junction had caused peritonitis. Small intestine much distended. Multiple small stercoral ulcers in lower few inches of ileum and cæcum. Other organs healthy.

Matting of small gut.—W. S—, male, æt. 51. Strangulated left inguinal hernia 3 months before admission; gut congested, quantity of adherent omentum ligatured and stump returned. Fourteen days after herniotomy, abdominal pain, constipation, and vomiting; tender mass felt just above Poupart's ligament. Relief by enemata. Subacute attacks of obstruction until readmission. Median cœliotomy, afterwards enlarged to left. Stump of omentum adherent to about 4 feet of matted small gut; omental stump detached and lateral anastomosis performed by Halstead's method between gut above and below obstruction. Progress good. Discharged cured on 39th day.

Peritoneal adhesions.—Frequent attacks of pain in right side of abdomen, accompanied by vomiting for 18 months. Frequency of attacks increased. Frequency of micturition with pain in penis for 12 months. Noticed swelling in iliac region at same time which was tender; decrease in size of swelling since

then. Indefinite mass in right iliac region, sliding away from fingers, reaching to umbilicus; slight tenderness. Urine alkaline, phosphates present. Kidney not felt; no tenderness in renal region. MacBurney's incision over appendix, which was found normal; fine adhesions binding cæcum to abdominal wall. Discharged cured on 48th day.

Acute obstruction after reduction of strangulated hernia.—H. L—, male, æt. 47. Baker. Right inguinal hernia for 11 years, became strangulated 48 hours before admission; strangulation lasting 10 hours and bowel then returned by patient by means of violent taxis. Reduction occupied 2 hours. Admitted collapsed, vomiting persistent. Had passed one stool since reduction of hernia. Treated by hypodermic injections of strychnine; brandy given by mouth. Condition improved slightly, but vomiting still persisting, the abdomen was opened 19 hours after admission. Intestines collapsed; a loop of small gut of about a foot in length was found much bruised and congested but thought to be recoverable. Abdomen closed. Vomiting continued after operation, and he had diarrhœa. Rectal feeding. He became rapidly more feeble and died on 3rd day. P.M.—Strangulated loop of gut found to be slaty-black with the neighbouring portion of mesentery. Pleural adhesions at anterior lower edge to pericardium. Calcareous bronchial glands. Area of pulmonary apoplexy in right upper lobe. Small cavity containing blood in lower lobe.

Volvulus of sigmoid flexure.—S. A—, female, æt. 46. Pain in left side for some months; severe 17 days before admission; swelling noticed just above Poupart's ligament 1 week later. Vomiting lasting 1 day at the date of appearance of tumour. No further symptoms. On admission, elongated swelling on left side of abdomen below umbilicus and lying obliquely down and in, reaching nearly to pubes; firm in consistence. Treated by enemata. Tumour disappeared. Median cœliotomy. No tumour found, but sigmoid mesocolon long with partial volvulus, which was reduced and gut replaced. Discharged 44th day.

Tuberculous peritonitis.—R. B—, female, æt. 15. Phthisis in family. Swelling in abdomen noticed 4 months, with pain in hypogastrium increased by food. Pain continued. Bowels regular. Increased frequency of micturition with pain for 3 weeks. On admission, swelling occupying median abdomen from umbilicus to pubes; dull on percussion. Indefinite fluctuation felt; nodular mass to be made out 2 inches in diameter on left side of swelling. No free fluid in abdomen. *Per vaginam* under anæsthetic, mass like knotted cord felt on either side of uterus; fluctuating swelling size of orange lying between rectum and vagina. Median cœliotomy. Peritoneum studded with tubercles. Loculated cavity on either side of uterus connected with Fallopian tubes, which were infected with tubercle; tubes removed and the walls of the loculi dissected out; they were composed of great omentum and organised lymph. Ovaries healthy. Progress uneventful. Discharged on 18th day. Readmitted later with abscess of abdominal wall. Discharged with sinus.

Cholelithiasis; previous cholelithotomy.—Cholelithotomy performed in September, 1895; gall-bladder drained; sinus left, which was afterwards closed by plastic operation. (*Vide* Abstract, 1895.) Attacks of biliary colic recurred, attended with enlargement of gall-bladder and slight jaundice. On admission, tumour in right hypochondrium, oval, moving slightly with respiration, con-

tinuous with liver. Cœliotomy through site of previous incision. Gall-bladder adherent. One large gall-stone removed with mucoid fluid. Discharge of bile-stained mucus day after operation, followed on succeeding days by discharge of pure bile. 15th day, injection of olive oil through gall-bladder showed no obstruction in cystic or common ducts. Discharge of bile gradually diminished. Discharged with small sinus on 31st day.

Stricture of rectum.—Males 1, females 4. C. 1, R. 1, U. 1, D. 2. Previous colotomy 1; "at own request" 1.

Fatal cases.

1. L. B—, female, æt. 28. Married. No history of syphilis obtained. Twelve months before admission, constipation; an operation was performed, ? nature. Constipation since operation. No passage of blood or mucus. No alteration in shape of stools. Stricture $2\frac{1}{2}$ inches from anus, impermeable to finger; mucous membrane below fixed to muscular wall; nodules in bowel wall. Hypertrophied cutaneous folds at anus. Linear proctotomy. Pneumonia 2 days after operation. Death on 15th day. P.M.—Left lower lobe in condition of grey hepatisation; layer of lymph on surface. Right lung congested and œdematous, with patches of consolidation. Valves competent, but atheromatous. Hypertrophy of left ventricle. Stricture of rectum $2\frac{1}{2}$ inches long; bowel healthy above. Double hydrosalpinx, with adhesion to bowel.

2. W. A. S—, female. Married. Vaginal discharge 12 months after marriage; no other history pointing to venereal disease. Two years ago difficulty of defæcation, with passage of blood. Constipation alternating with diarrhœa. Swelling about anus. Increasing weakness for 6 months. Hæmoptysis during last 3 months. Labia œdematous, with papillomatous growths around anus. Stricture 2 inches from anus, admitting tip of forefinger. Communication with vagina. Discharge of blood and mucus. Delirium at night. Diarrhœa. Gradually increasing weakness. Left inguinal colotomy. Death on 5th day after operation. P.M.—Stricture with ulceration, extending over 4 to 5 inches of bowel. Old pelvic peritonitis and cellulitis. Fistulous communication between rectum and vagina. Chronic abscess to left of rectum, which communicated by sinuous tracts with rectum and bladder. Right hydrosalpinx. Severe cystitis. Liver fatty. Slight chronic interstitial nephritis.

Ulcers of rectum; multiple abscesses of liver.—M. D—, female, æt. 40. Married. Admitted in dying condition. No history obtainable. P.M.—General septic peritonitis, caused by infection by subdiaphragmatic abscess which had burst into peritoneum. Multiple pyæmic abscesses in left lobe of liver. Portal vein normal. Rectum and sigmoid flexure for 15 inches almost completely denuded of mucous membrane. Chronic interstitial nephritis. Multiple papillomata of bladder, encrusted with phosphates. Mitral incompetence. No endocarditis.

GENITO-URINARY SYSTEM.

Stricture.—Males 60. C. 31, R. 23, U. 2, D. 4. Discharged "at own request" 2.

Situation.—Membranous 21; bulbous 15; penile 13; meatal 3; penile and bulbous 5; situation not stated 5.

Complications.—Retention 16; fistula 9; abscess 6; extravasation of urine 4; sloughing of penis 1; enlarged prostate 1.

Treatment.—Dilatation 33; external urethrotomy 2; internal urethrotomy 8; incision 2; Cock's perinæal puncture 6.

Fatal cases.

1. A. T—, male, æt. 39. Extravasation. Pyæmia. (*Vide* Special Table III.)

2. J. D—, male, æt. 40. Carman. Stricture many years. Bulbous. Extravasation in perinæum, scrotum, and penis. Cock's puncture and incisions. Fever. Bronchitis. Delirium at nights. Gradually failed. Death 7th day. P.M.—Bulbous urethra had sloughed; penis and scrotum gangrenous. Pus in prostate. Bladder healthy. Ureters normal. Kidneys, cortices swollen and marked with fatty striæ. Liver fatty. Adhesions at right apex with fibrosis. Emphysema. Intense congestion of lower lobes.

3. J. H—, male, æt. 36. Shop assistant. Stricture for years. Bulbous. Admitted comatose, with extravasation of urine. Cock's puncture and incisions. Extravasation spread above pubes; further incisions. Death on 2nd day. P.M.—Hypertrophy and fasciculation of bladder. Acute or chronic cystitis. Ureters and kidneys showed no signs of backward pressure; decomposed. Extravasation over lower abdomen and thighs. Cirrhosis of liver. Left pleuritic effusion. Lungs emphysematous. Cardiac hypertrophy.

4. G. S—, male, æt. 62. Labourer. Stricture for 16 years. Difficulty of micturition for 6 days; gradually increasing. Impermeable stricture in penile urethra. Retention slightly relieved by hot bath. Urine very foul. Cock's puncture on 2nd day. Wound became foul. Sloughing of prepuce; incisions and scraping. Fever. Restlessness and delirium. Wounds cleaned under treatment by boracic baths, which had to be discontinued on account of failure of strength. Diminished amount of urine. Emaciation. Partially comatose for several days before death on 17th day. No P.M.

Enlarged prostate.—Males 20. C. 1, R. 13, D. 6. Stricture 1; retention 8; hæmaturia 4; cystitis 5; phosphate incrustation of bladder wall 1.

Treatment.—Supra-pubic cystotomy 6; perinæal cystotomy 2; prostatectomy 1; vasectomy 1.

Fatal cases.

1. J. L—, male, æt. 71. Coachman. Difficulty of micturition for months. Pain and hæmaturia 14 days. Retention relieved by catheterism. Catheter fever. Cough. Death on 11th day. P.M.—Lateral lobes of prostate affected. Ureters dilated. Early hydronephrosis. Acute or chronic interstitial nephritis. Heart hypertrophied. Aortic atheroma.

2. H. N—, æt. 73. Difficulty of micturition for years. Cystitis. Ulcer of tongue 5 weeks. Tubercle at right apex. Perinæal cystotomy. Secondary hæmorrhage. Became comatose. Urine diminished. Irregular low fever. Death on 45th day. P.M.—Cystitis and hypertrophy of bladder. Calculi with pyelitis of left kidney. Right kidney normal. Gall-stones. Aortic atheroma. Tuberculosis of lungs.

3. T. F—, æt. 57. Engineer. Difficulty of micturition for 2 years. Catheter

4 days before admission, followed by hæmaturia. Cystitis. Bladder distended. Has general paralysis. Supra-pubic cystotomy. Bedsore. Improvement noted, followed by relapse. Irregular fever. Diminished amount of urine. Restlessness and delirium. Fæces passed unconsciously. Temp. $106\cdot8^{\circ}$ before death. P.M.—Hypertrophy of bladder; mucosa covered with phosphatic deposit. Right pleurisy, with collapse of lower lobe. Emphysema. Thickening of dura and especially pia mater.

4. S. J—, male, æt. 56. Bootmaker. Gravel passed 3 years ago; 1 year later difficulty of micturition. Has passed catheter since. Pain of late. Supra-pubic cystotomy. Phosphatic calculi and cystitis. Irregular fever after operation. Urine increased. Coma. Death on 13th day. P.M.—Sacculated bladder, with mortary material in recesses. Right ureter thickened. Pyonephrosis with friable calculus and gravelly material. Chronic interstitial, with commencing suppurative nephritis. Left kidney, mortary material in pelvis; substance similar to right. Hypertrophy of left ventricle.

5. H. P—, æt. 73. Hæmaturia 4 years. Interference with micturition 18 months. Cystitis. Perinæal cystotomy; ulcer on left side of bladder wall. Fever after operation. Partial coma, with failing pulse. Death on 16th day. P.M.—Middle lobe of prostate enlarged. Bladder hypertrophied. Ureters dilated. Right kidney small; mainly pelvis. Pyelitis in left kidney. Emphysema. Liver fatty.

6. A. B—, æt. 60. History 2 years. Hæmaturia. Retention. Catheter passed, followed by hæmorrhage. Gradually increasing feebleness. Death on 2nd day. P.M.—Clot in bladder. Middle lobe of prostate enlarged; laceration to left source of hæmorrhage. Right suppurative nephritis. Liver fatty.

Phimosis; extravasation of urine.—P. J. O—, æt. 3 weeks. Swelling of penis and scrotum since birth. Penis, scrotum, and thighs red and œdematous. Feeble child. Temperature. Phimosis. Death on 3rd day. P.M.—Prepuce slightly adherent. Membranous urethra much distended. No stricture. Suppurative general peritonitis. Ureters and pelves of kidneys dilated. Pathologist reports that “peritonitis appeared in some way connected with the condition of the urinary organs.”

Foreign body in bladder.—Difficulty of micturition 6 weeks previously. Patient while drunk passed what he thought was a piece of bone size of clay-pipe stem 3 inches long into urethra; pushed on into bladder by doctor. Since then pain increased by movement. Increased frequency. Hæmaturia. Cystitis. Symptoms decreased. On admission, pain on micturition and cystitis. Sounded, no foreign body felt. Supra-pubic cystotomy; body removed 3 inches long, friable, and broken up into strips; nature doubtful; possibly a piece of wood. Primary suture of bladder wall, which afterwards gave way. Discharged cured on 46th day.

Moveable kidney.—Females 6. C. 4, R. 2. Right 6. Lumbar nephropexy 4.

Renal calculus.—Males 7, females 2. C. 4, U. 1, D. 4. “At own request” 1; hæmaturia 6; albuminuria 6; pain in loin only 1; colic 5. Calcium oxalate 1; uric acid 3; oxalic with phosphates 1; phosphatic 2. Stones multiple 2; hydro-nephrosis 1; uræmia 1.

Treatment.—Lumbar nephrolithotomy 7; abdominal nephrolithotomy 1.

Fatal cases.

1. E. M—, male, æt. 37. Painter. History 12 years. Colic. Passage of calculi. Definite tender spot in loin. Lumbar nephrolithotomy. Two small stones, triangular; uric acid; one coated with layer of dark blood. Much hæmorrhage, arrested by plugging. Death from collapse 2nd day after operation. P.M.—Left hydronephrosis. Ureter slightly dilated. Anæmia.

2. A. S—, male, æt. 51. Cabman. Exploration of kidney 2 years ago. Twelve months pain in loin with colic. Hæmaturia. Tender spot felt in abdomen over kidney, which is enlarged. Albuminuria. Hæmaturia continued after rest in bed. Abdominal nephrolithotomy. Small uric acid stone. Renal vein torn; hæmorrhage arrested by forcipressure. Forceps removed 2nd day; further hæmorrhage arrested by gauze plugging. Cough and expectoration. Death on 22nd day from basal pneumonia. P.M.—Left kidney firmly adherent and slightly increased in size. Cortex and pyramids fatty. Pelvis dilated and mucous membrane injected. Ureter normal. Compensatory hypertrophy of right kidney. Double basal pneumonia with right pleurisy. Heart hypertrophied.

3. W. H—, male, æt. 56. Farm bailiff. Renal colic at age of 15, with hæmaturia. Pain in loin continuous and aching 5 months ago, lasting 2 months. Hæmaturia 3 weeks. Large fluctuating renal tumour. Much blood in urine, with albumen and pus-cells. Abdominal exploration; incision made at right angles into loin; 29 oz. of bloody fluid removed with deep black calculus, rough and speculated, size of walnut. Some shock at end of operation, which increased rapidly afterwards; slight hæmorrhage from wound. Infusion of saline 5 pints. Death from shock same day. P.M.—No blood in peritoneum. Right large hydronephrosis, with unopened cyst size of large potato; contained chocolate-coloured fluid. Mucous membrane injected and velvety in places. Areas of phosphatic deposit on wall. Left kidney enlarged. Hypertrophy of left ventricle. Atheroma of aorta.

4. *Renal calculi; uræmia*.—W. C—, male, æt. 54. Brought to hospital unconscious, with ruptured varicose vein. Pulse weak and running. Stertorous breathing. Albuminuria. Infusion of saline 2 pints; rapid improvement in pulse. Coma increased and death in few hours. P.M.—Right kidney converted into fibrous sac filled with friable phosphatic calculus accurately moulded to cavity. Left kidney large; fatty appearance. Cortex swollen, mottled, not sharply differentiated from pyramids. General atheroma. Hypertrophy and fatty degeneration of heart. Calcified glands in neck. Multiple psammomata.

Hydronephrosis.—Male 1. D. 1.

A. O—, male, æt. 33. Painter. Has had slight transient pain in right lumbar and epigastric regions for years. Twelve months ago severe pain in loin, which has recurred with gradually decreasing intervals between the attacks, and increased pain. Lately attacks of pain accompanied by rigors and vomiting. No attacks of renal colic. Hæmaturia on one occasion. Has conjunctivæ tinged with yellow during attacks. On examination no tumour to be felt. Urine alkaline, with phosphates present. Four days later abdominal muscles on right side rigid, with general tenderness of abdomen, worse in the right hypochondriac

region. Moveable tumour felt moving with respiration and connected with liver; evidently gall-bladder. Another large tumour present in flank, reaching within 1 inch of iliac crest. Dull on percussion; could not be separated from liver above. Pain. No passage of urine. Slight jaundice. Tumours had disappeared on the following day. Lumbar nephrectomy. Hydronephrosis of congenital origin; fair amount of kidney substance present. No shock after operation. Slight rise of temperature. Became much collapsed on night of 2nd day. No urine passed. No hæmorrhage. Pale, anxious expression. Feeble pulse. Death on 3rd day after operation. P.M.—Left kidney hypertrophied. Wound and pedicle healthy. Early fatty change in liver. Obsolete tubercle at left apex.

Pyonephrosis.—Fatal case.—J. S—, female, æt. 36, Married. History 7 months. Pain in loin with attacks of renal colic. Vomiting. Abdomen rigid. Firm, tense, oval swelling coming down from beneath liver, measuring 4 by 3 inches, reaching to within 1 inch of umbilicus. Swelling tender, moveable with respiration, posterior margin does not encroach upon loin. Dull on percussion. Slight œdema over tumour. Liver enlarged. Albuminuria. Pyuria. Some improvement in patient's condition. Resonance noted behind tumour, which, however, seemed to go through to loin. 17th day, lumbar incision. Kidney situated deeply from wound, so that colon and intestines came between it and the abdominal wall. Nephrotomy. Pus escaped with small calculus. Improvement after operation with less discharge of pus from sinus and less pyuria which lasted for 2 months, then increase of pus in dressings, with fever. Pain. Exploration of sinus; no relief. Patient gradually become more feeble. Nephrolithotomy on 114th day, abscess drained. Large stone, oxalate of calcium, laminated with layer of phosphates. Some improvement after operation, followed by good deal of pain. Hectic fever. Discharged on 172nd day to convalescent home with sinus still persistent. Readmitted 6 weeks later in a more feeble condition, with the local conditions unaltered. Nephrectomy. Kidney very firmly adherent. Great shock. Infusion, 2 pints of saline into vein and later in the ward. Death same day. P.M.—Left kidney much enlarged. Capsule adherent. Calculus. Lardaceous liver. Spleen large and pale, no iodine reaction.

Vesical calculus.—Males 6. C. 4, R. 1, D. 1. Recurrent with supra-pubic lithotomy 4 years previously 1; supra-pubic lithotomy 3; litholapaxy 1; impacted in membranous urethra 1; perinæal section and stone pushed back into bladder 1. Encysted 2; urates 2; phosphatic 1; phosphate and uric 1.

Fatal case.—C. T—, male, æt. 4. Trouble with micturition since birth; circumcision 1 month previously, no improvement. On admission he had great pain on micturition, with increased frequency. Urine contained albumen and pus-cells. He was sounded under chloroform on several occasions, but no stone was detected. Irrigation of bladder. Symptoms somewhat relieved by rest. Discharged on 30th day. Readmitted 5 days later with recurrence of former symptoms; retention on admission, rough body felt at neck of bladder on passage of catheter. Supra-pubic lithotomy. Large stone of putty-like consistence, composed of phosphates and uric acid, removed; weighed 90 grains. Sacculus found at left upper posterior part of bladder; in this the stone had

laid until distension of the bladder had stretched the orifice of the sacculus and permitted its escape into the general cavity of the bladder. Primary suture of bladder wall. Temperature subnormal after operation. Urine alkaline, with pus and albumen. Vomiting on 8th day after operation, followed by restlessness, thirst, and feeble rapid pulse; cyanosis with rapid respiration. Temp. 104°. Death on 9th day. P.M.—Cystitis. Right pyonephrosis with phosphatic calculus. Left kidney normal.

Undescended testis.—Males 15. C. 14, U. 1. Suture to bottom of scrotum 4; to pubes 1; cord freed 3; castration 6; radical cure of hernia 3; orchitis 1.

Tuberculous testis.—Males 8. C. 2, R. 6. Prostate involved 1; castration 3; incision and scraping 2; previous nephrectomy for tuberculous kidney 1.

Hydrocele of tunica vaginalis.—Males 17. C. 17. Excision 10; incision and plugging 4; tapping 3.

Hydrocele of cord.—Males 2. C. 2. Excision 1, tapping 1.

Hydrocele of canal of Nuck.—Females 2. C. 2. Excision 2.

Spermatocele.—Male 1. C. 1. Excision 1.

Chronic interstitial mastitis.—Females 9. C. 7, U. 2. Cysts 2; amputation of breast 2; excision 4.

Tuberculous mastitis.—Females 3. C. 3. Abscess 1; incision and scraping 2; amputation with clearance of axilla 1.

Galactocoele.—Three weeks after first confinement, abscess of right breast. After healing of abscess 12 months ago tumour noticed in centre of right breast, which has gradually increased in size. No pain or discharge from nipple. Circular tumour, $1\frac{1}{4}$ inches in diameter, situated directly above right nipple, circumscribed and elastic, in breast substance. Skin not adherent. Glands palpable in axilla, but no obvious enlargement. Excised. Tumour consisted of a cavity the size of a large hazel-nut, filled with material of exactly the appearance and consistence of butter. Cyst wall smooth. Under the microscope only fat-cells were seen.

Fibroids of uterus.—Females 5. C. 1, R. 3, U. 1. Cœliotomy 1; extirpation 1; rest 3.

E. S—, female, æt. 48. Married. Children 6. Twelve months' swelling of abdomen, with increase of size. Occasional pain and œdema of legs. Tense fluctuating tumour in lower abdomen reaching to within 3 inches of umbilicus. Median cœliotomy. Tumour tapped, no fluid, found to originate from left of uterus, had burrowed between layers of broad ligament, from which it was enucleated. Peritoneal flaps sutured over area of detachment from uterus. Left ovary cystic, removed. Progress uneventful. Discharged cured on 27th day.

Ruptured tubal pregnancy.—L. C. F—, female, æt. 39. Married. Last child 7 years previously. Amenorrhœa for 4 months, passage of blood and decidua 2 months ago. Three weeks ago fainting fit, with pain in the abdomen and vomiting; 2 days before admission pain much more severe, with collapse and vomiting. On examination, patient much collapsed and anæmic, with feeble pulse. Abdomen distended and tender in lower part, moves with respiration.

Shifting dulness in flanks. *Per vaginam* uterus enlarged and pushed forward. Mass in Douglas's pouch depressing posterior fornix. Median cœliotomy. Blood removed. Fœtus of about 4 months found lying loose in abdomen and attached by funis to placenta situated at lower portion of right Fallopian tube. Funis ligatured and fœtus removed. Gauze plugs introduced. Much collapse after operation. Infusion of normal saline Oij. No improvement. Death a few hours after operation. P.M.—Fluid blood in peritoneum. Right Fallopian tube ruptured 1 inch from uterus, distal portion of tube spread out under the placenta, the latter encroaching a little on the pouch of Douglas. Ovary flattened out beneath placenta. Uterus enlarged and pushed to the left. No decidua membrane. Other organs anæmic but healthy.

Tuberculous ovary, Fallopian tube, and peritoneum.—A. M. H—, female, æt. 22. Married. Mother has tubercle. Admitted with obstruction in July, 1896. Abdomen opened and gut matted together found; adhesions broken down and patient relieved. Eight months ago admitted on Medical side with chronic obstruction and tender mass in left iliac fossa. Relieved by treatment. Re-admitted 6 months later with vomiting and distended abdomen and tender mass in left iliac region. Lateral cœliotomy and attempt to remove left Fallopian tube, which was much thickened; it was removed. Patient's condition would not allow the operation to be concluded. Much pain in abdomen followed. Hectic fever and occasional vomiting. Sent to convalescent home. Admitted on Surgical side with sinus at scar of second operation. Sinus explored. Right cœliotomy, with removal of ovary and Fallopian tube; an abscess opened during their removal. Fever relieved by operation. Discharge from left side remained sweet until 4 days after operation, when it became fecal. Condition gradually became worse, emaciation and extreme weakness, with abdominal pain. Death on 49th day. P.M.—Abdominal viscera matted together as result of chronic miliary tuberculosis. Abscesses between intestinal coils. Right kidney small, with atrophied cortex, and pyonephrotic cavity with caseous areas in walls. Left pyonephrosis, cortex and medulla could not be differentiated, semi-translucent. No iodine reaction. Tubercles at trigone of bladder. Left ovary presented tuberculous areas. Liver fatty. Other organs healthy.

VASCULAR SYSTEM.

Popliteal aneurysm.—Males 2. R. 2. Readmission 1.

J. H—, male, æt. 26. Carman. No history of syphilis or alcohol. Eleven days before admission, difficulty of flexion of knee, followed in 2 days' time by pain shooting down leg, with tingling and numbness in left foot. On examination there was a well-marked popliteal aneurysm presenting all the characteristic signs. No evidence of intra-thoracic disease. Pain down leg severe, with slight œdema. Before operation on 9th day the aneurysm increased slightly in size. Ligature of femoral at apex of Scarpa's triangle. Floss silk used for ligature and the coats of the vessel divided. Pulsation in aneurysm at once disappeared, and it became smaller and softer. Pain still severe. Slight pulsation on 14th day, which continued for 2 days. Pulsation returned and dis-

appeared at intervals until discharge on 50th day, when the aneurysm was very much smaller but with definite pulsation present. Readmitted 3½ months later. Swelling had returned in popliteal space a fortnight before admission, and had since increased in size. On examination indefinite swelling in popliteal space with feeble pulsation. The swelling and pulsation diminished with rest. Digital compression of the common femoral was carried out on the 47th day for 3 hours, with slight decrease in swelling, and repeated on the 54th day; pulsation ceased, little diminution in swelling. Discharged on 63rd day.

Aneurysm of aorta; dyspnœa.—R. E. H—, male, æt. 50. Railway inspector. Came to hospital with the most extreme dyspnœa and cyanosis. Tracheotomy performed at once after a whiff of chloroform. Respiration stopped immediately after the first incision was made and artificial respiration failed. Battery was applied to the præcordium, ice to the abdomen, hot flannels to the head, and flagellation. P.M.—Aortic arch extensively atheromatous and uniformly dilated into aneurysmal sac. The sac had ruptured anteriorly into the connective tissue between it and the trachea, forming a false aneurysm as large as a bagatelle ball, and lined in part with laminated fibrin and exerting considerable pressure over the trachea a little above its bifurcation. Hypertrophy of left ventricle, aortic orifice incompetent, valves thickened. Lungs emphysematous with congestion and œdema.

Arterio-venous aneurysm of radial artery.—A. C—, male, æt. 20. Barman. A month before admission a plate-glass window fell on patient, causing a punctured wound in the centre of the right forearm. There was a good deal of hæmorrhage. One small artery was ligatured, and the wound dressed; hæmorrhage recurred, but on removing the dressing no bleeding point could be seen. Firm pressure applied. Healed by first intention. Ten days after accident small pulsating swelling noticed beneath scar, which has steadily increased in size. On examination, pulsating swelling, rather smaller than walnut, in right forearm; systolic murmur heard. Distinct thrill felt in vein running from tumour towards elbow. Radial pulse small. Radial artery ligatured above and below; aneurysm and the vein connected treated in the same way. Aneurysm communicated with the vein by a small opening. Discharged cured on the 18th day.

Senile gangrene.—I. F. G—, female, æt. 63. No history of syphilis. Amputation through the thigh for senile gangrene of the right foot three years previously. On admission gangrene of all toes of the left foot with the exception of the second toe. Illness commenced with discoloration round the nails. Some cellulitis on the dorsum of the foot. Urine normal. Tip of finger also gangrenous, in which state it has been for one month prior to admission. 6th day, albumen present in the urine. Gangrene spreading. Amputation of the leg through the tubercle of the tibia by lateral skin flaps. 17th day, flaps gangrenous. Amputation through the thigh in the lower third by lateral transfixion flaps. Very little hæmorrhage. Death on 22nd day. Temperature rose to 101·6° after second operation, but was otherwise normal. P.M.—Wounds healthy. Both femoral arteries plugged with ante-mortem clot from the level of Poupart's ligament to the seat of amputation. Hypertrophy and dilatation of the left ventricle and simple dilatation of the right. Early atheroma of the aorta.

Nutmeg liver with fatty change. Interstitial nephritis. Microscopical examination of the posterior tibial arteries showed great thickening of the intima without much affection of the other coats. There was no indication of degenerative further process. At one spot the artery was blocked with an organising thrombus.

2. A. B—, æt. 56, female. Gangrene of foot. Thrombosis of superficial femoral artery. Married and has 2 children and a miscarriage between them. Gnawing pain in the foot for 3 weeks when the toes became black. On admission, all the toes of the left foot are black, and beyond this there is a zone of cellulitis reaching halfway up the calf. Urine normal. Amputation of the thigh on the 3rd day by antero-posterior flaps, the temperature being raised to 101° F. Fair amount of bleeding. Temperature rose to 103° F. and did not become normal until a few days before discharge on the 53rd day. Wound healed with some suppuration, and on one or two days the urine contained albumen. State of arteries: the superficial femoral was thrombosed. Sections of the femoral showed well-marked atheroma. The intima was much thickened and showed signs at places of a further degenerative process, but no calcareous plates were visible. The middle coat was also distinctly affected with small-cell infiltration.

3. F. H—, male, æt. 62. Smith. Patient has always been healthy, but has suffered from varicose eczema on the legs for some years. Pain in the little toe of the left foot for 4 months. Fourteen days before admission a small sore developed on the toe and gradually spread until the whole toes became black. Arteries not particularly rigid. Urine normal. Toe gradually regained its normal state, and the patient was discharged on the 34th day as relieved.

4. W. P—, male, æt. 77. Patient had a sore on the toe for eight weeks. On admission the second toe was gangrenous, and on the outer side of the great toe was a discharging ulcer. The urine was normal. Treated with chlorinated soda lotion and discharged as relieved on the 53rd day. No mention was made of the state of the arteries.

5. S. G—, female, æt. 61. No definite history of disease. Swelling of legs 3 months, followed by itching and tingling. Second left toe soon after became gangrenous, and 3 weeks before admission the right toe became affected in the same way, and a gangrenous patch appeared on the leg. On admission, general appearance fairly healthy. Second left toe and the great right toe in a state of mummification. (Edema of both feet. Skin of right foot shiny. No pulsation in the tibials. Dry gangrene of the thumb, index and middle fingers of the left hand. Radial arteries atheromatous. Urine 1010, no sugar, one sixth albumen. Temperature normal. Operation not thought advisable, and the patient died on the 20th day. P.M.—Early atheroma of the aorta. Valves of the heart thickened. Typical interstitial nephritis. Lungs congested. No definite arterial obstruction.

6. J. C—, male, æt. 65. Engineer. Ulcer on the heel 9 months, gangrene of edges 14 days. On admission, feeble old man. Pulse intermittent. Systolic murmur. Foul callous ulcer on the heel of the left foot. Fourth and fifth toes dry and black. Urine acid, 1012, trace of albumen. Gangrene gradually

spread until all the toes were involved. The three inner toes separated, but the patient passed into a state of low muttering delirium and died unrelieved on the 58th day. Temperature throughout was normal. The greatest amount of urine passed in 24 hours was 65 oz. No P.M.

7. E. C—, male, æt. 62. Porter. No history of previous illness. Present illness started 3 months previously with pain in a corn on the ball of the great toe, which the patient cut, after which an ulcer developed, became inflamed, and ended in the toe becoming gangrenous. On admission there is a perforating ulcer on the ball of the right toe, the edges are gangrenous and the base is formed by the bare bone of the phalanx. The patient was unable to stand with his feet together, and complained of shooting pains in the legs, but there were no other signs of ataxia. The temperature was normal, as was also the urine. On the 4th day the limb was removed in the lower third of the thigh. The wound healed fairly well, there being some slight sloughing of the edges. The patient was discharged as cured on the 34th day.

Diabetic gangrene.—C. H. C—, æt. 57. Engineer. History of syphilis and typhoid. Three weeks ago the great toe was injured by a nail, and then became inflamed and at last gangrenous. This process spread until, on admission, the whole of the metatarsal region and the tarsal region on the outer side were involved. The temperature was normal and the urine contained sugar. The limb was amputated through the upper third of the leg by flaps. There were considerable sloughing of the flaps, but the wound did well eventually. For some few days after the operation there was a little restless delirium and the patient was inclined to pull off his dressings. The amount of urine varied from 27 to 84 oz., and the sugar from 250 to 2670 grs. in the 24 hours. There was a tendency for the urine and the sugar to increase after the operation, but no measurement was made before the operation, so a comparison was impossible. Arterial system: the arteries were stated clinically to be markedly atheromatous.

Glycosuric gangrene.—1. J. R—, male, æt. 57. In November, 1895, the patient suffered from gangrene of the right second toe complicated with glycosuria. A diabetic diet was ordered and the toe removed, and the patient was discharged as cured. Eight months before the present admission the patient suffered from a suppurating corn on the plantar surface of the left toe. Ever since the last stay in hospital the diet has been a diabetic one according to the patient's account. On admission, the whole of the left foot was in a state of cellulitis. The temperature was normal, and sugar was present in the urine. A diet without gluten bread but otherwise devoid of starch was ordered, the foot incised and treated with boracic lotion. A slough the size of a half-crown separated, and the patient left the hospital with the wound healed on the 45th day. The amount of urine varied from 39 to 75 oz. in the 24 hours. The greatest amount of sugar in the 24 hours was 624 grs. and the least 108 grs. Albumen was present the whole time and varied from a trace to a sixth.

2. T. G—, male, æt. 63. Corn porter. Pain in the left foot 3 months before admission. Discoloration of the skin of the fourth and fifth toes 14 days. Suffered from thirst 11 weeks. No hunger or increase in the quantity of urine. Delirium at night for several days before admission. Gangrene of the fourth

and fifth toes, with a red blush spreading up the leg to the knee. Very offensive. Urine contained sugar. Temp. 102·6°. Gangrene spreading. Patient drowsy and wandering. 3rd day, amputation of the leg in the lower third of the thigh by lateral transfixion flaps. Patient did not improve, and died on the 5th day. Amount of urine varied from 59 ? to 25 ? oz.; sp. gr. from 1026 to 1034; sugar from 1298 to 500 grs. P.M.—Flaps normal. Heart hypertrophied. Valves competent. Pancreas normal. Rest of body very much decomposed. Microscopical examination of the femoral artery showed very great thickening of the intima with calcareous plates. The thickening was uneven over the lumen of the artery. The middle and outer coats also exhibited small-cell infiltration. The tibials showed the same changes, but in addition the lumen was completely blocked with an organised thrombus. The intima was also the seat of calcareous degeneration.

THYROID.

Parenchymatous goitre.—Male 1, females 5. C. 2, R. 4. Dyspnœa 1; loss of voice 1.

Treatment.—Thyroid tablets 1; tonic treatment 2; tracheotomy and removal of isthmus 1; excision of isthmus with portion of lateral lobes 1; excision of lobe 2.

Adenoma.—Females 4. C. 4. Cystic adenoma 1; multiple tumours 1; excision of tumour 2; with lobe 2.

Cysts.—Females 4. C. 4. Calcareous degeneration of cyst wall 1; cholesterine in 2; shelled out in 4.

ARTICULAR SYSTEM.

Shoulder.—*Tuberculous arthritis*.—Males 4. C. 1, R. 2, U. 1. Tuberculous bursa 1; caries sicca 1. Anterior excision 2; incision and scraping of bursa 1; rest 1.

Arthritis (?).—Female 1. R. 1. Leather shoulder-cap; ? tubercle.

Elbow.—*Tuberculous elbow*.—Males 3, females 3. C. 2, R. 3, D. 1. Tuberculous dactylitis 2; ankylosis 1.

Treatment.—Amputation of arm 1; excision 1; arthrectomy 3.

Fatal case.—E. S—, female, æt. 13 months. Abscess of elbow at age of 3 weeks; at age of 6 months swelling of elbow and 3rd finger of left hand. On examination, 3 sinuses about elbow with very little movement. Tuberculous dactylitis and abscess. Arthrectomy of elbow and phalanx scraped. Discharge persisted after operation. Diarrhœa. Discharged on 20th day. Readmitted 11 days later. Discharge and diarrhœa increased. Emaciation. No improvement. Irregular fever on 14th day. Gradual loss of strength. Death 25th day. P.M.—Left elbow disorganised; expansion of bones forming joint; pus in half of the length of medullary cavity. Broncho-pneumonic tubercle. Caseous mediastinal and mesenteric glands.

Ankylosis.—Males 5, females 2. C. 3, R. 4. Fibrous 6.

Cause.—Septic arthritis 2; fractures 4; injury 1; sinus 1. Excision of head of radius 1, of portion of capitellum 1; passive movement 1; massage 4.

Wrist.—*Tuberculous arthritis*.—Males 3, females 5. C. 3, R. 5. Readmission 2; flail joint from previous excision 1; tenosynovitis 1; trauma 1; family history of tubercle 1.

Treatment.—Amputation of forearm 1; Langenbeck's excision 2; incision and scraping of tenosynovitis 2; rest 3.

Ankylosis.—Males 2, females 2. C. 1, R. 3. Following cellulitis 2; wrenching under anæsthetic and massage 4.

Hip.—*Tuberculous arthritis*.—Males 21, females 31. C. 4, R. 44, U. 1, D. 3. Family history of tubercle 12; trauma 12; dorsal dislocation 1; necrosis of femur 3; of pelvis 2; meningitis 1; tuberculous nodules in brain 1.

Treatment.—Anterior excision 3; anterior and posterior methods combined 1; partial excision 1; anterior arthrectomy 2; incision and suture of abscess 6; incision and drainage of abscess 3; sequestrotomy 5; scraping of sinus 9; reduction of dorsal dislocation 1; amputation of thigh, middle third 1; amputation of hip, Furneaux Jordan's method, 1; anterior racket incision 1; remainder by rest, extension, plaster-of-Paris or Thomas's splint.

Fatal cases.

1. E. C—, female, æt. 3. Admitted with 2½ years history. Previous admission in 1896, when abscess opened and sutured; incision afterwards broke down. On examination, sinus in front of hip leading to carious neck of femur. No movement in joint. Double Thomas's. Bedsores. Cough and emaciation. Abscess formed behind joint; incised and drained. Hectic fever; continued emaciation; partially comatose before death on 82nd day. P.M.—Margin of acetabulum carious; abscess in iliac fossa with caries of ilium; no communication with hip. Caseous tubercles in liver. Calcareous tubercles in spleen. Right kidney, pelvis, and calices dilated with thickening and ulceration of lining membrane. Innumerable tubercles throughout organ. Ureter normal. Miliary tubercles in left kidney. Few tubercles in intestinal walls. No ulceration. Chronic fibroid phthisis at both apices. Brain. Pia arachnoid infiltrated with lymph at base. Miliary tubercles over surface of brain. Turbid fluid in ventricles.

2. F. H—, female, æt. 13. Sudden onset with pain in left hip 6 months ago; treated by Thomas's splint. On examination, abscess over front of left hip, with immobility and shortening, both apparent and real. Tubercular disease of right knee. Sinus in right foot, leading to astragalus. Night pain. Partial excision by anterior method on 14th day; head of femur extensively diseased; some affection of acetabulum. Caries of astragalus scraped and greater portion of bone removed. Fit on 40th day, with double internal strabismus. Wound of hip has broken down. 61st day, fits have recurred; vomiting; drowsiness; double optic neuritis. 75th day, incontinence of fæces and urine. Increased pain, tenderness, and swelling in knee; free lateral movement. Partial coma. Headache. 106th day, no alteration in condition; hip incision reopened and pus evacuated. Sinus of astragalus has healed. Knee disease progressing. 124th

day, headache and vomiting ceased. Not comatose. Incontinence of urine and fæces continues. Hectic fever. 147th day, headaches occasionally. Discharge from hip remains the same in amount. 162nd day, emaciation with feebleness have rapidly increased. 182nd day, has become semi-comatose, with cold hands and feet and feeble pulse. Increased discharge. Bedsore. Coma increased until death on 227th day. P.M.—Much caries of femur and pelvis. Extensive disease of right knee with destruction of bone. Few pleural adhesions. No tubercle in lungs. Few caseous deposits in cortices of kidneys. Right lobe of cerebellum replaced by mass of caseous tubercle with a thin covering of brain tissue; inner third of the left lobe was similarly affected. No alteration in contour of the cerebellum. Posterior half of left temporo-sphenoidal lobe replaced by similar material. Ventricle distended with clear fluid. No meningitis.

3. E. T—, female, æt. 14. Began to limp 15 months ago, with pain in knee. Abscess formed and burst. Pain at night. On admission, emaciated girl. Flexion and rigidity of right thigh. Sinus in front of thigh. Trochanter raised. Abscess in buttock. Anterior excision on 2nd day; much necrosed bone in femur, acetabulum, and ischium. Relief after operation until 16th day, when rise of temperature with increased discharge. Patient rapidly failed, and amputation of the hip was performed by Furneaux Jordan's method on 36th day. Death from shock. P.M.—Caries of pelvis. Lungs densely adherent. No tubercle. Liver fatty.

Ankylosis.—Males 2, females 4. C. 2, R. 4. Fibrous in all. Tuberculous 3; rheumatic 2; after fracture of femur 1; subtrochanteric osteotomy 2; extension 1; massage 2.

Knee.—*Tuberculous arthritis.*—Males 24, females 20. C. 14, R. 30. Readmission 12; family history of tubercle 8; of trauma 10; hydrops articuli 1.

Treatment.—Excision 7; partial excision 1; arthrectomy 4; partial arthrectomy 2; arthrotomy 2; scraping of sinus 2; amputation of thigh 3; remainder by plaster-of-Paris splints.

Ankylosis.—Males 9; females 3. C. 4, R. 8. Bony 3; fibrous 9.

Causation.—Previous excision 4; previous arthrectomy 1; septic arthritis 2; gonorrhœal 1; ? cause 3; previous fracture of patella 1.

Treatment.—Cuneiform osteotomy of femur 2; massage 1; passive movement 5; plaster-of-Paris splint 2; rest 3.

Loose bodies.—Males 3, female 1. C. 3, U. 1. Foreign body visible through skin 1; trauma 4; arthrotomy and extraction 3; fibro-cartilage 3.

Dislocated semilunar cartilage.—Male 1. R. 1. Plaster-of-Paris splint.

Ankle.—*Tuberculous arthritis.*—Males 3, females 4. C. 3, R. 3, D. 1. Tarsus involved 2; caries of tibia 1; previous excision 1; lupus of tongue 1; tuberculous elbow 1.

Treatment.—Anterior arthrectomy 1; arthrectomy through multiple incisions 1; partial excision 1; amputation of leg 1; plaster-of-Paris splint 2.

Fatal case.—C. H—, male, æt. 12. Fall 7 weeks before admission, followed by swelling and pain in right ankle. On admission, swelling and immobility of ankle; abscess on inner side. Arthrectomy through multiple incisions; joint

disorganised. Swelling of elbow and knee noted on 70th day. Headache and vomiting independently of food. Hydrocephalic cry, with delirium at night. Optic discs blurred. Some improvement of symptoms, with partial coma alternating with noisy delirium. Death on 115th day. P.M.—Tuberculous synovial disease of right elbow. Right ankle-joint disorganised, with caries of astragalus and os calcis. Extensive miliary tuberculosis of both lungs, with few small recent cavities. Healed tubercle at apex of left lower lobe. Peritoneum matted; no tubercles seen. Extensive basal tuberculous meningitis with distension. Caseous foci in cerebellum.

AUDITORY SYSTEM.

Mastoid abscess.—Fatal cases.

Otitis media suppurativa; mastoid abscess; meningitis.—T. F. G—, male, æt. 4 months. Swelling noticed behind left ear 1 week. Discharge 1 day. Temp. 98°. Stacke's operation. Temperature rose to 102·4° and remained high. Hydrocephalic cry. Tache cérébrale. Noisy and restless. Diarrhœa. Squint. Gradual increasing weakness. Death on 10th day. P.M.—Thin layer of bone between brain and outer surface of mastoid. Suppurative basal meningitis most intense at base but extending to vertex. Sinuses healthy.

Otitis media suppurativa; meningitis. T. M—, female, æt. 10. Discharge from right ear for 2 years before admission with earache. A fortnight before admission pain in ear, followed by giddiness 5 days later. Discharge ceased. Vomiting with frontal headache set in. Admitted with headache and vomiting. No mastoid tenderness. Temperature normal, afterwards rose to 102°. Marked nystagmus set in on 2nd day, edges of optic discs blurred. Retraction of head. Antrum opened, some pus found. Temporo-sphenoidal lobe explored with negative result. Death on 4th day. P.M.—Suppurative meningitis in middle and posterior fossæ. Tympanum full of reddish-grey fluid. No evidence of bone disease. Sinuses healthy.

Otitis media suppurativa; mastoid abscess.—1. V. P. M—, male, æt. 8 months. Offensive discharge from right ear for 14 days before admission, followed 11 days later by appearance of mastoid abscess. Temp. 98°. Stacke's operation. Temperature rose gradually to 104°. Vomiting and diarrhœa. Later, rise of temperature to 108°. Increasing weakness. Death on 7th day. P.M.—Tympanum contained pus; its roof was roughened. No meningitis or abscess. Caseating tuberculous nodule in left hemisphere at upper extremity of fissure of Rolando. Tuberculous pleurisy. Scattered islets of broncho-pneumonia. Caseating bronchial glands. Liver contained tubercles.

2. R. H—, female, æt. 67. Discharge from ear for 60 years. Facial paralysis 2 months. Swelling and tenderness behind ear started few days before admission. Mastoid process exposed, tip and inner surface found carious, and abscess found in neck beneath deep fascia communicating with external meatus. After operation discharge remained offensive. Asthenia with irregular temperature. Death on 10th day. P.M.—Dura covering posterior surface of petrous bone discoloured and softened; outside this cavity exposed in communication with operation wound, and lined with greyish-black slough. No intra-cerebral

disease. Atheroma of aorta. Fibrosis at both apices with cretaceous nodules. Chronic interstitial nephritis.

3. A. M. M—, female, æt. 4 months. Discharge from left ear, with swelling behind for 4 days. Abscess incised. Gradual wasting, with diarrhoea and sickness. Death on 11th day. No P.M.

Otitis media suppurativa; temporo-sphenoidal abscess.—A. A—, male, æt. 32. Discharge from right ear for years. Two years ago mastoid abscess incised. Pain on right side of head for 1 month. No rigors, vomiting, or vertigo. On admission, drowsy and irritable, with tenderness over mastoid; no œdema or redness. No optic neuritis. Temp. 102.6° . Pulse 72. Mastoid antrum explored; bone sclerosed and antrum contained foetid pus. Temperature rose after operation to 104.8° , with delirium and restlessness at night. Lateral sinus explored on 2nd day, but was not thrombosed. No relief of symptoms. Temperature remained high and the pulse ranged between 70 and 80. Restlessness increased at night. Slight œdema of optic discs. Exploration of cerebellum and temporo-sphenoidal lobes on 10th day. On exploration of the latter turbid fluid escaped, apparently from extra-dural space. No relief of symptoms. Death on 13th day. P.M.—The roof of the tympanum had been largely removed. Interior of tympanum and antrum carious and contained a little foetid pus. On removal of brain a quantity of blood-stained fluid seen in cavity of skull, with a very slight admixture of pus which was not seen to escape from brain, but pathologist's opinion was that it escaped from abscess cavity in temporo-sphenoidal lobe later described. General intense leptomeningitis. Right temporo-sphenoidal lobe occupied by enormous abscess, replacing nearly all its white substance, and measuring $3\frac{1}{2}$ inches. Cavity absolutely empty. Wall fairly well formed and its surface granular; it had been punctured by the trocar; it communicated with the ventricle on its inner surface. Ventricular walls somewhat softened. No infarcts in lungs, which are œdematous and congested. Early interstitial nephritis.

Otitis media suppurativa; temporo-sphenoidal abscess; basal meningitis.—C. H—, female, æt. 23. Discharge from ear since childhood. Pain in ear for $2\frac{1}{2}$ months. One week ago lost consciousness for a short time. Headache became very severe and accompanied by pain down neck and back. Vomiting. Delirium at nights with fever. No rigors. Partial loss of vision the day before admission. On examination, patient partially comatose, but could answer questions if pressed; muttering delirium at times. Meatus and tympanum filled with granulations discharging offensive pus. Some tenderness over mastoid. Double optic neuritis. Movements of eyes do not quite co-ordinate. No other paresis. No tenderness over jugular. Temp. 97.6° . Pulse 66. Antrum exposed, no pus found. The sinus also exposed and found to contain fluid blood. Trephined over posterior part of temporo-sphenoidal lobe; brain pulsating feebly. It was punctured in various directions with a fine trocar and cannula. No pus found or extra-dural abscess in the neighbourhood of the petrous bone. Temperature rose to 100° after operation, pulse 78, and drowsiness became less. Cerebellum explored 2nd day with negative result. Patient improved steadily, the pulse rate being slightly above normal and the temperature normal or slightly subnormal, mental condition becoming also normal. Wound healed

well. On 11th day abscess discharged through skin incision, had burrowed beneath flap as far as cerebellar trephine hole. 12th day, vomiting with frontal headache were complained of, and patient suddenly became unconscious in the afternoon. Temp. 101.6° . Pulse 84. Extremities held rigid, more so on right side. Pupils reacted sluggishly to light and corneal reflex diminished. Right pupil larger than left. Lay in generally flexed position. Slight cyanosis. Could not be roused. Later became restless and moaning. Corneal reflex increased. Both pupils dilated and fixed, especially the right. Moved extremities. Temp. 100.2° . Pulse 114. Respirations irregular and quickened. Coma gradually increased. Pupils both became fully dilated and fixed. Temp. 103.2° . Pulse became running. Respiration became gradually slower and ceased before pulse. Death 12 hours after recurrence of symptoms. P.M.—No perforation of tegmen tympani. Sinuses healthy. Suppurative basal meningitis. Ventricles distended with greenish puriform fluid. In anterior two thirds of right temporo-sphenoidal lobe was a very thick-walled abscess, $1\frac{1}{4}$ inches in diameter; brain substance around was soft. Contained very green and viscid pus. Lining membrane $\frac{1}{8}$ in. thick and easily shelled out. Dura over cerebellar trephine hole thickened and sodden. Other organs healthy.

G. T. C—, male, æt. 38, porter. Discharge from left ear 11 years, following a blow. Three weeks before admission, malaise with vertigo and pain over the head. Occasional vomiting. No alteration in discharge. On admission, left facial paralysis. No tenderness over mastoid. Temperature slightly raised. Stacke's operation 8th day. Carious bone beneath aqueductus Fallopii removed; facial nerve degenerated. On 14th day rambled in his speech, refused food; later he had alexia and agraphia. Answered questions sensibly occasionally; on other occasions the answers were ridiculous. Tactile sensibility was dulled. No muscular weakness or spasm. Left knee-jerk increased. Pupils equal and active. Temperature subnormal. Became gradually comatose. Vomiting. Pupils at times quite small and then reacted feebly, later they would dilate and then react to direct and indirect stimulation. Eyes generally divergent and palpebral fissures imperfectly closed. Edges of discs slightly blurred, doubtful papillitis. Temporo-sphenoidal lobe explored through trephine hole above and slightly behind mastoid process. Dura tense. Trocar introduced downwards and forwards; thick-walled abscess cavity evacuated containing $1\frac{1}{2}$ oz. of offensive greenish pus, extended 3 inches by measurement with a probe; finger inserted, abscess found at apex of lobe. Trephine opening made over abscess and intervening bone removed; rubber drainage-tube inserted. Smaller and more recent abscess found in superior convolution of temporo-sphenoidal lobe, with small communication with larger abscess; cavities thrown into one by division of brain substance; second drainage-tube inserted and remainder of cavity plugged. Pulse increased with evacuation of abscess. Recognised wife immediately after recovery from anæsthetic. 15th day, temp. 99.6° , pulse 100. Disinclination to move right hand; later began to talk, can answer questions. Evening, knee-jerks brisk, ankle-clonus. Mumbles when asked to read, but holds book correctly; will grasp hands. This mental condition rapidly improved, together with the power of reading and writing properly; these powers fail after they are repeated a few times. Some restlessness at night. Gradual improvement until 67th day, when temperature rose to 103° , and later

fell to normal, with frontal headache. Wound healthy. 70th day, headache continues, gradual rise of temperature, followed by a rigor. Temp. 103·2°, and vomiting; dulness gradually increasing to coma; bulging of scalp over trephine hole. Muttering delirium, cannot answer questions. 71st day, restlessness, with increased frequency of vomiting. Finger introduced into brain substance, and abscess containing similar pus to that of former abscess evacuated; drainage-tube and gauze plug inserted. Pulse rate increased after operation. Restlessness continued, controlled by morphia. 72nd day, mental condition improved, will answer "yes" or "no;" complained of "bad smell" occurring before occurrence of symptoms. Headache. Slight lateral nystagmus, pupils equal and small. Temperature normal. 73rd day, restlessness continues. Muttering delirium. Cannot answer questions. Retention of urine, frequent hiccough. 75th day, no decrease of symptoms; temperature and pulse gradually rising. Twitching of left hand, some retraction of head. Became gradually comatose. Retention of urine alternating with incontinence. Laboured respiration and death on 75th day. P.M.—No meningitis. Sinuses healthy. Large and ragged abscess cavity occupying the whole of left temporo-sphenoidal lobe; it had been well drained. Ventricles not distended. Some inflammatory softening of posterior limb of internal capsule. Right pleural adhesions. Remaining organs healthy.

Temporo-sphenoidal abscess discharging through auditory meatus viâ antrum.
—E. C. T—, female, æt. 3½. Occasional discharge from left ear for 10 months. Six weeks before admission, discharge from ear with pain, followed a fortnight later by vomiting. Spasmodic cries at intervals followed by drowsiness; the temperature was normal and pulse 70. The following day twitching of the left hand with left ptosis were noticed, lasting for 3 days, when child's condition became worse; discharge from ear profuse. Head retracted. Left ptosis. Right corneal reflex absent. Pupils unequal. Four days later, frequent movements of left arm and leg; the following day left facial paralysis was noted; during the following 19 days condition improved, drowsiness becoming less. Then discharge from ear became more profuse, with return of drowsiness. Vomiting. Temperature normal. On admission marked drowsiness, but will sit up in bed when asked to do so. Left facial paralysis and ptosis. Paresis of left arm and leg. Profuse discharge from ear. Temperature normal. Profuse discharge of pus from meatus recurring immediately after syringing. Antrum exposed, outer wall somewhat sclerosed, contained pus and granulation tissue; tympanic ring removed; antrum and tympanum curetted; continuous discharge of pus; hole found in roof of antrum through which probe passed into cavity in temporo-sphenoidal lobe. Bone removed upwards and backwards; antral roof removed; perforation of dura seen, dura incised; hæmorrhage arrested by plugging; several ounces of pus escaped from temporo-sphenoidal lobe. Silver drainage-tube inserted. Eyes examined under anæsthetic. Double optic neuritis. 8th day, little discharge of pus but much cerebro-spinal fluid. Condition good, repeated sentences; moved limbs equally. No facial paralysis. Pupils equal and active. Continuous improvement. Escape of cerebro-spinal fluid continues. Silver tube replaced by rubber one on 11th day, which was removed on 17th day. Discharge of pus and cerebro-spinal fluid gradually diminished. Marked optic neuritis present but subsiding. 28th day, continuous

improvement. Little pus. Right optic neuritis practically subsided, still present in left. 46th day, course uneventful with exception of increased discharge with slight fever. 53rd day, child became drowsy, temperature rose to 104° , followed by rigor. Vomited. Pulse rapid. No pus from wound. Jugular vein tied. Temporo-sphenoidal lobe explored and reaccumulation of pus found. No relief of symptoms; became restless. Temperature remained high. Pulse running. Death on 55th day. P.M.—Basal meningitis. Sinuses healthy. Remains of healing abscess in temporo-sphenoidal lobe, with two or three small outlying pockets of pus, shut off from general cavity. On inner side of main abscess was a second, the size of a hazel-nut, containing thick yellow pus; lining membrane well defined and smooth; it communicated with the descending horn of the lateral ventricle on same side. Both ventricles filled with pus and hence the meningitis.

Otitis media suppurativa; mastoid abscess; cerebellar abscess.—K. E—, female, æt. 11, pain in right ear for several years. Influenza 6 to 8 weeks ago, which persisted; 3 weeks ago rigor, followed by fever lasting a week. No further rigor. Eight days before admission vomiting, followed by impaired mental condition, drawling speech, and answers to questions became restricted to "yes" and "no." No recognition of persons for last three days. Weakness of right arm 2 days. Temperature raised during week before admission. On examination, lies curled up on left side; resents examination. Practically unconscious, but screams when roused. Pupils vary, react slowly, deviation to left. Temp. 99° ; pulse 100. Under observation pupils dilated and became fixed; head retracted; deep inspiration; legs rigid; both arms moved. Thin pus in meatus. Antrum explored, contained pus which had entered groove for lateral sinus, which was thrombosed with sloughing of wall; $\frac{3}{4}$ oz. of pus removed from anterior part of right lobe of cerebellum. 2nd day, resents interference, but mind clearer; answers questions. Eyes move correctly. Twitching of right side of face. Weakness of right arm. Knee-jerks: right absent, left slight. Right leg flaccid, left slightly rigid. In evening right eye directed out and up. Pupils contracted. Temperature subnormal. 3rd day, patient lying half asleep, with occasional fits of screaming. Right eye directed up and out, but when patient looks at anything both eyes converge properly. Twitching of right face continues. Right arm more flaccid, but is occasionally moved. Evening temperature 103.4° . 4th day, very restless during night. Temp. 104° . Knee-jerks absent, twitching of left hand. Œdema of right upper lid. Conjunctivæ suffused. Vertical nystagmus, which became more marked towards evening. Pupils contracted, left papillitis with hæmorrhage, right disc not seen. Operation; ligature of jugular, no thrombosis. Cerebellum explored and second abscess found behind and to the inner side of first one; drainage-tube inserted. Temperature remained between 104° and 105° . Reduced by sponging. 5th day, vertical nystagmus less distinct. Right facial paralysis. In evening, general twitching of extremities, especially right arm. Tendency to clonus in feet. No knee-jerks. Right eye up and out. Pulse irregular and rapid. Respirations still quickened. Temp. 101° to 102° . Vomiting. 6th day, slept well. Brighter and recognised people. Pulse still rapid. 7th day, screaming fit, with temperature of 105.2° , followed by coma. Twitching of left hand. Later became restless. Pupils widely dilated. Temperature still high. Pulse 160. Both hands twitched.

Temporo-sphenoidal lobe explored with trocar and cannula; no abscess tapped. Lateral ventricle tapped and drained. Cerebellum explored with negative result. Twitching of both arms after operation. 7th day, partial coma. Temp. 106·6°. Pulse and respirations rapid and irregular. Eyes wide open. No squint or nystagmus. Facial palsy present. Slight twitching in right arm. Became gradually weaker and died in evening. P.M.—(Edema of membranes on removing cerebellum; adhesion between right lobe and petrous bone broken down, with escape of pus. Cerebellum had contained 3 abscesses; one exactly occupied the corpus dentatum and had not been drained, it measured 1 inch in diameter. The other abscesses lay in anterior two thirds near the periphery, and one above the other; they communicated with each other as a result of the operation; each was slightly larger than the preceding abscess. Ventricular system slightly distended. Right lateral sinus plugged with healthy clot. Other sinuses and jugular veins healthy. Right antrum had been well drained. The left contained pus. Diffuse broncho-pneumonia in left lower lobe, not pyæmic.

See Special Table III for two cases of lateral sinus pyæmia.

Retro-pharyngeal abscess; ulceration of external carotid; death.—C. V. R—, male, æt. 11 months. Sore throat for 4 months, with difficulty of swallowing, gradually increasing until admission. On examination, bulging of posterior pharyngeal wall, with swelling on right side of neck. Temp. 103·2°. Incision along anterior border of sterno-mastoid, enlarged gland removed, and serum evacuated from retro-pharyngeal space. Wound sutured later, which broke down with discharge of pus. Abscess drained. Discharged 14th day. Readmitted 1 week later with re-collection of pus, which was drained. Sudden severe hæmorrhage from mouth, nose, and wound, and death almost immediately. P.M.—External carotid exposed in wall of abscess cavity, with ulcerated opening just above bifurcation of common trunk. No bone disease. Abscess arose in cervical glands. Organs anæmic. Caseous bronchial glands. Miliary tubercles in spleen.

MALFORMATIONS.

Multiple congenital strictures of small intestine.—E. H. P—, male, æt. 3 days. Symptoms of obstruction since birth. Anus well formed. Rectum explored after removal of coccyx, no abnormality found. Abdomen opened in left iliac region, enormous coil of small gut presented. Stricture found and enterotomy performed just above stricture. Death from exhaustion the following day. P.M.—Small gut for 12 inches below duodenum much distended and thickened. Five or six constrictions in remainder of small gut, each about 1 inch in length and impervious, as tested by forcing on bowel contents. The constricted parts of thickness of thin twine. Colon and rectum pervious, size of goose-quill.

SUMMARY OF INJURIES.

GENERAL INJURIES.

Burns.—Males 20, females 29. C. 31, D. 18. Epilepsy 1.

Causation.—Clothes ignited 18; lamp upset 2; fall into grate 8; lamp explosion 5; gas explosion 4; burning pitch 2; molten iron 1; hot iron 1.

Treatment.—Boracic baths 9; boracic ointment 7; Thiersch grafts 8; remainder by hot lotions, strychnine, and morphia.

Fatal cases.

Under 24 hours.—Males: 2 years 1, 6 years 1. Females: 2 years 1, 3 years 1, 4 years 1, 25 years 1, 32 years 1, 56 years 1, 73 years 1.

Over 24 hours.—Males: 1 year 2. Females: 7 months 1, 1 year 3, 2 years 1, 3 years 1, 8 years 1.

H. W. M—, male, æt. 1 year. Burn of head and neck of 1 month's duration. Convulsions on 3rd day and death. P.M.—No abnormal change detected.

Scalds.—Males 21, females 12. C. 26, D. 7.

Causation.—Hot watery fluids 32; boiling fat 1. Scald of mouth and pharynx 2.

Fatal cases.

Under 24 hours.—Males: 3 years 2. Female: 1 year 1.

Over 24 hours.—Males: 1 year 1, 2½ years 1, 4¼ years 1. Female: 6 years 1.

S. B—, female, æt. 6. Drank from spout of kettle. Dyspnœa. Intubation. Relief for some hours. Tube coughed up. Tracheotomy. Signs of consolidation, left lower lobe. Broncho-pneumonia, right base. No P.M.

D. K—, male, æt. 4¼. Drank boiling tea from spout of teapot. Dyspnœa. Tracheotomy. Later rapid respiration and dyspnœa returned. Death on 9th day. P.M.—No œdema of glottis. Bronchitis and broncho-pneumonia.

Wound of cheek; salivary fistula.—E. D—, female, æt. 40. Stab, perforating right cheek, with table knife. Discharge of saliva 15 days after injury. Readmitted. Strand of horsehair introduced along duct and external opening sutured. Discharged cured on 11th day.

Concussion.—Males 57, females 17. C. 68, R. 1, D. 5.

Complications.—Scalp wounds 13; wound of face 1; contusion of arm 2;

fractured nasal bones 1; fractured clavicle 2; fractured radius and ulna 2; fractured jaw 1; fractured ribs 2; suppression of urine 1; right-sided weakness 1.

Fatal cases.

1. W. P—, male, æt. 49. Epilepsy for years. Fell in fit against post. Drowsy and restless until admission on following day. Drowsiness, with muttering at intervals. Pulse 100. Respiration laboured and irregular. Pupils equal and contracted, react sluggishly. No paralysis. Sensation dulled. Restlessness during night. Albuminuria. No alteration in condition with exception of gradual increasing weakness. Temp. 103° before death on 7th day. P.M.—Dura dense, firmly adherent to bone. Whole of subarachnoid space infiltrated with thin layer of recent blood-clot. No laceration of brain or membranes. Brain substance soft. Blood-stained fluid in ventricles. Emphysema. Heart hypertrophied and dilated. Chronic interstitial nephritis. Pathologist reports hæmorrhage of traumatic origin.

2. C. P—, male, æt. 70. Fall 25 feet. Admitted unconscious, with absent corneal reflex. Pupils dilated and stabile. Scalp wounds. Fractured radii and ribs. Death in few hours. P.M.—Left ribs from 1st to 8th fractured just outside junction of rib and cartilage, except the 8th, which is broken at its mid-point. Parietal layer of pleura torn, with blood in cavity. Old tubercle at apices. Contracted granular kidneys. Brain membranes thickened. Laceration of tip of right temporo-sphenoidal lobe.

3. J. B—, female, æt. 48. Epilepsy. Fall down stairs. Admitted unconscious, with stertorous breathing. Corneal reflex feeble. Pupils equal, reacted feebly. Fit, both sides of body involved, especially the left. Fits recurred. Death in few hours. P.M.—Small punctiform hæmorrhages into pia arachnoid.

Subdural hæmorrhage.—1. W. A—, male, æt. 45. Found lying outside a public house. Alcoholic. Admitted comatose, with stertorous breathing. Pulse slow and full. Pupils equal, reacted sluggishly. Temperature rose to 105°. Death in few hours. P.M.—Large subdural hæmorrhage over convexity of right hemisphere extending to base; source could not be found. Punctiform hæmorrhage into pons. Heart enlarged and flabby. Kidneys healthy, with the exception of two small cysts.

2. S. P—, male, æt. 52. Fall on head. Conscious. Fractured clavicle. No paralysis. Pupils and pulse normal. Later became drowsy and then delirious. Drowsiness increased. Convulsion and death few hours after admission. P.M.—Large intra-dural hæmorrhage on right side covering convexity of hemisphere. Tip of temporo-sphenoidal lobe extensively lacerated. Fractured right ribs 3rd and 7th. Atheroma of vessels. Heart hypertrophied. Chronic interstitial nephritis. Liver fatty.

Fractures of vault of skull.—Simple depressed, males 2; female 1. C. 2, U. 1. *Treatment.*—Rest in 2; “at own request 1.”

Compound fractures of vault.—Male 1, female 1. C. 2. Treated by antiseptics and rest. Fissured fractures.

Compound depressed fractures of vault.—Males 5. C. 5.

Gunshot wound of head.—F. C—, male, æt. 22. Mason. Admitted uncon-

scious, with blanched appearance. Bullet wound in left temporal region. Pupils equal and active. Semicircular scalp flap thrown down and trephine applied around hole in frontal bone; depressed fragments of bone with chipped-off portion of bullet removed. Bullet not found. Conscious after operation. Rise of temperature on 3rd day with little slowing of pulse. Healed first intention. Slight irregular nystagmus noted on 16th day. Fundus normal. Discharged cured on 25th day. The bullet was seen by the X rays lying at the base of the brain. Readmitted 6 months later. He had shot himself with a revolver through the previous bullet hole. Patient collapsed from hæmorrhage. Flap turned down. Track of bullet ran directly across brain and reached bone on the other side. No bullet found. Hæmorrhage from brain substance arrested by plugging with gauze. Few hours after operation two fits, epileptic in character. All limbs twitched. Tongue bitten. Urine voided. Cyanosis in second fit. Focal origin not ascertained. Discharge of cerebro-spinal fluid on 2nd day. 6th day, no optic neuritis. Cerebro-spinal fluid gradually decreased until cessation on 15th day. No impairment of memory. X rays showed both bullets lying on opposite side of brain at the base.

Compound depressed fracture of parietal bone.—1. E. C. B—, male, æt. 51, potman. Fell 20 feet from ladder, in sitting position, and ironwork of lamp fell on his head. Admitted conscious, with three scalp wounds and depressed fracture. Scalp wound enlarged and triangular piece of depressed bone $1\frac{1}{4}$ inches long elevated and removed; its outer table was on a level with the inner table of rest of skull. Fracture situated 1 inch from and internal to left parietal eminence. Fragments of bone replaced. 3rd day. Collection of blood-clot beneath flap, portions of bone and the clot removed. Wound afterwards suppurated, as did also a hæmatoma of elbow. Discharged with sinus of scalp on 60th day.

2. J. J—, male, æt. 8. Struck on head by swing. No concussion. Scalp flap turned down. Depressed fracture situated just posterior to right parietal eminence. Trephined behind depression and several fragments removed. Dura mater uninjured. Discharged cured on 16th day.

Fractured base.—Males 18; females 4. C. 17, R. 1, U. 1, D. 3.

Middle fossa 12; anterior fossa 2; middle and posterior fossa 2; anterior and middle fossa 4; double facial paralysis 1, and paralysis of 4th and 6th nerves 1; paralyse all in same case. Paralysis of internal rectus 1; optic neuritis 1; hæmorrhage from nose 4; from ear 16; serous fluid from ear 2; convulsions 1; cerebral irritation 1; permanent loss of mental faculties 2. Fractured jaw 1.

Fatal cases.

1. T. S—, male, æt. 23. Assaulted. Found unconscious. Admitted comatose with several scalp wounds and profuse hæmorrhage from right ear and nose. Pulse feeble and running. Death in few hours. P.M.—Two fractures, one extending from point posterior and external on right side of foramen magnum, running forwards across petrous bone, and terminating in anterior part of middle fossa; second started at foramen magnum, ran outwards across former fracture through occipital into parietal bone. Good deal of subdural hæmorrhage over whole of left hemisphere, especially in frontal and occipital regions. Slight subdural hæmorrhage on right side. Laceration of anterior part of left frontal lobe.

2. G. B—, male, æt. 42. Platelayer. Knocked down by engine. Admitted much collapsed. Hæmorrhage from nose and ear. Multiple scalp wounds. Oblique fracture of right humerus in lower third. Triangular piece of bone, the apex of which was the anterior superior spine broken off the right ilium. Death almost immediately.

3. C. S—, male, æt. 3. Fell 8 feet on stone floor on his head. Admitted unconscious. Hæmorrhage from left ear. Pupils equal and active. Vomiting. Improved after admission. Escape of cerebro-spinal fluid from left ear on 2nd day. Gradual rise of temperature with restlessness and delirium. Rapid, feeble pulse. Death on 5th day. P.M.—Fissured fracture extending from left temporal region across left tympanum into base of skull. Fracture traversed groove for middle meningeal artery, tearing the vessel; extensive subdural hæmorrhage. Basal meningitis involving under surface of medulla, pons, and cerebellum.

Simple fracture of base and vertex.—Males 3, female 1. D. 4.

Fatal cases.

1. E. A. W—, female, æt. 2½. Knocked down by van, wheels of which passed over head. Became unconscious, and bled from nose and right ear. Admitted semi-conscious and moaning, with rapid breathing. Pulse feeble and rapid. Corneal reflex feeble. Pupils contracted and equal; did not react. Vomited blood. Became comatose after admission, with steady rise of temperature to 106°. Death on 2nd day. P.M.—Fracture ran from vertex down to right orbit, extending backwards for an inch along its roof. Circular portion of bone $\frac{3}{4}$ inch diameter, slightly depressed, situated just above superciliary ridge. Slight pial hæmorrhage over right frontal lobe.

2. J. B—, male, æt. 25. Head crushed between swinging skip of bricks and side of barge. Concussed. Admitted comatose, with hæmorrhage from both ears and nostrils. Right pupil fixed and dilated with ptosis of right eyelid. Left pupil contracted and reacted feebly. Restlessness and vomiting during night. Became conscious on 2nd day. 3rd day, paralysis of right 3rd, 4th, and 6th nerves. Paralysis of 6th left nerve and both facial nerves. Muscles of mastication paralysed. Mental faculties apparently unimpaired. Offensive discharge from both ears. Lies curled up, with his head retracted. Temp. 102·2°. Improvement during two following days, then gradually became comatose with stertorous breathing, which gradually became quieter and more shallow. Temperature rose to 104·2°, and after death to 106·4°. P.M.—Fissured fracture running vertically upwards from left external meatus for 2 inches, then turning forwards for 1½ inches through parietal bone. Patch of extra-dural meningitis 1 inch in diameter opposite ascending limb of fracture. External portion of dura softened and sloughing. No general meningitis. Fracture continued across base from meatus through petrous bone, and just behind posterior clinoid process to right petrous, and ended in squamous portion of temporal. Fragments easily made to gape. Cranial nerves to point of entry of foramina uninjured.

3. W. M—, male, æt. 49. Fall 50 feet down lift. Admitted comatose with large scalp wound in left temporal region. Stertorous breathing. Pulse slow and full. Pupils unequal and fixed. Hæmorrhage from left ear. Death in four hours. P.M.—Fissured fracture of vertex 3 inches long. Small fissure confined to left petrous bone, running across middle ear. Vertex of brain

covered by thin layer of extravasated blood. Hæmorrhage into left side of pons Varolii.

Depressed fracture of parietal bone extending across base of skull.—F. W. N—, male, æt. 18. Fell 16 feet. Admitted comatose with stertorous breathing. Pulse 44. Corneal reflex absent. Pupils dilated and very sluggish. Death in few hours. P.M.—Occipital scalp wounds. Portion of bone 2 inches by 1 inch at posterior part of right parietal bone depressed below level of skull; fracture extended also to base, crossing posterior fossa, traversing lateral sinus through petrous bone, then passed outwards and forwards through foramen ovale and rotundum across sphenoidal fissure to lesser ring of sphenoid and cribriform plate, ending just to left of middle line. Pia arachnoid hæmorrhage along superior longitudinal fissure. Laceration of inferior surface of left temporo-sphenoidal and frontal lobes, with large subdural hæmorrhage.

Compound fracture of base and vertex.—Males 3, female 1. D. 4.

Fatal cases.

1. *Compound depressed fracture of frontal bone.*—Female, æt. ? Jumped off platform in front of train; engine struck forehead. Admitted comatose, with compound comminuted fracture of vertical plate of frontal bone, through which brain matter was protruding. Hæmorrhage from nose and right ear. Elevation of fragments with removal of protruding brain. Coma became less after operation. Death in 3 hours. P.M.—Frontal bone comminuted; both orbital plates involved. Fracture ran back to left tympanum. Squamo-petrous suture had “started.” Anterior two thirds of frontal lobes pulped. Chronic interstitial nephritis. Liver fatty.

2. — T—, male, æt. 59. Painter. Fell 12 feet on to pavement. Admitted comatose. Pupils fixed. Blood and cerebro-spinal fluid escaping from right ear. Fractured ribs. Respiration shallow and rapid. Pulse feeble. Died at once. P.M.—Large compound comminuted fracture of left frontal and temporal bones; fracture extended through right tympanum across foramen magnum and an inch beyond. Subdural hæmorrhage over vertex. Atheroma of cerebral vessels. All the ribs, except the 1st, on right side fractured at angles and near sternum, 1st only broken in front. 2nd, 3rd, and 4th left ribs broken close to sternum. Aortic atheroma. Hypertrophy of left ventricle. Chronic interstitial nephritis.

3. T. S—, male, æt. 69. Fall down flight of steps. Admitted collapsed, with feeble respiration. Compound fissured fracture of right frontal bone. Proptosis. Fractured ribs. Death on following day from respiratory failure. P.M.—Fracture extended across roof of orbit and upwards across frontal to temple. Orbit full of blood. Dura intact. 1st to 8th right ribs fractured. Right pleura adherent and emphysematous, lung being wounded in two places in lower lobe. Liver fatty.

4. G. B—, male, æt. 32. Fireman. Fell off engine and struck head against step. Admitted unconscious. Pupils equal and active. Compound depressed fracture of right parietal bone. Bleeding from right ear. No signs of compression. Half-inch trephine applied over fracture; inner table depressed over area size of four-shilling piece, elevated and removed. No recovery of consciousness. Hæmorrhage from wound stopped by pressure. Urine and fæces passed unconsciously. Gradual lapse into coma. Death in few hours. P.M.—Right occipital

parietal suture had been started. Fracture ran from right jugular foramen across petrous bone and then turned across the middle fossa in a tortuous direction.

Cut throat.—Males 8, female 1. C. 7, D. 2. Self-inflicted 8; homicidal 1; thyro-hyoid space 4; crico-thyroid space 1; thyroid cartilage 2; tracheal space 1; superficial 1; air-passages opened 7.

Fatal cases.

1. J. B—, male, æt. 74. Thyro-hyoid space opened; muscles of base of tongue divided. Tracheotomy. Partial suture and plugging with gauze. Death on 7th day. Broncho-pneumonia. Liver fatty.

2. W. S—, male, æt. 32. Publican. Cricoid cartilage and upper two rings of trachea divided. Sutured. Œdema of glottis following day. Tracheotomy tube inserted. Death on 3rd day. Œdema of glottis. Frothy fluid in trachea.

Fractured ribs.—Males 14, females 4. C. 13, U. 1, D. 4. Subcutaneous emphysema 2; hæmothorax 4; injury to lung 5; contusion of kidney 1.

Fatal cases.

1. B—, male, æt. ? Thrown from dicky of hansom against rail of cab. Admitted unconscious with scalp wounds and fractured left ribs. Subcutaneous emphysema. Death in few hours. P.M.—All left ribs fractured with exception of 1st, 11th, and 12th. Fracture just outside junction of ribs and cartilage. Sternum fractured at level of 4th rib. Right 5th rib fractured. Laceration of left lower lobe. Hæmothorax. Liver fatty. Early interstitial nephritis.

2. R. B—, male, æt. 8. Run over by trap. Admitted collapsed. Subcutaneous emphysema over thorax. Expectoration of frothy blood. No fractured rib detected. Death on 3rd day. Fracture of right 5th rib at centre. Two to three pints of blood in pleura. Lung completely collapsed. Lower portion of upper lobe torn completely through to root. Branch of pulmonary artery torn across just before division into branches; torn end filled by partially decolourised adherent clot.

3. H. W—, male, æt. 44. Run over by cart. Fractured right ribs. Surgical emphysema. Cyanosis. Death in few hours. Upper nine ribs on right side fractured just anterior to their angles; 3rd to 7th also detached from vertebræ, and these projected into pleural cavity. Pneumo-hæmothorax. Punctured wound of upper lobe and extreme laceration of lower. Cirrhosis of liver. Chronic interstitial nephritis.

4. C. H—, female, æt. 45. Run over by omnibus. Admitted collapsed. Fractured ribs and clavicle on left side. Hæmoptysis on 2nd day, followed by subcutaneous emphysema. Death on 3rd day. P.M.—3rd to 6th left ribs fractured, 6th near angle, the others at convexity. One and half pints of blood in pleura. Small laceration of left upper lobe. Mediastinal and subcutaneous emphysema.

Fractured spine.—Males 5. C. 1, R. 2, D. 2.

1. J. C—, male, æt. 53. Fall backwards down flight of stone stairs. Prominence and tenderness of 12th dorsal spine. Plaster-of-Paris jacket. Rest in bed. Discharged cured 45th day.

2. F. M—, male, æt. 30. Five months before admission thrown out of cart on to his head. No fracture detected by doctor. Neck became painful and

swollen shortly after accident; improved after 2 months had passed. Returned to work. Stiffness and swelling increased in following 2 months, then remained stationary. Weakness of arms noticed, especially in left. Tingling and numbness of left hand. On admission, head held flexed and rigid. Broadening of back of neck, with much thickening of vertebræ. 6th cervical spine prominent. Head cannot be extended. Further flexion is possible. Rotatory movements slightly impaired. The upper cervical vertebræ move forwards as a whole. Nothing felt on front of vertebræ. Both upper extremities are wasted and weak, especially the left. Muscular wasting and weakness in right arm of the following muscles: supra- and infra-spinatus; muscles of arm, particularly biceps and supinator longus. Slight wasting of deltoid. Left arm, loss of power and wasting of long flexors of fingers and short muscles of hand. Muscular weakness due to pressure on 5th and 6th right cervical nerve-roots and the left 8th cervical and 1st dorsal. Power much improved while in hospital.

3. G. R.—, male, æt. 49. Fell off van and bent up beneath the axle. Hæmatoma over spine in dorso-lumbar region, with diffused tenderness. No irregularity of spines detected. Complete loss of power and sensation over lower limbs; limit could not be accurately determined. 2nd day, complete loss of power in lower limbs. Diaphragm and intercostals active, as well as abdominal muscles. Impaired sensation from concave line, with concavity upwards situated $2\frac{1}{2}$ inches below umbilicus and extending downwards as far as Poupart's ligament, and also over a tongue-shaped area extending from the centre of Poupart's ligament downwards over the front of the thigh for 4 inches; right area somewhat larger. Blunted sensation as far as upper level of trochanter on the outside. Blunted sensation gradually merging into complete anæsthesia. Tingling sensation felt when this area touched. Complete anæsthesia below. No line of hyperæsthesia. All reflexes absent. Penis turgescient. No desire to pass urine. Retention. Dribbled once. No difference in temperature between paralysed and unparalysed parts. Complains of pain just above area of blunted sensation. Fæces passed unconsciously. 8th day, blunted sensation now extends to within 1 inch of umbilicus; area over thighs diminished except on outer side, where sensation is better. Occasional dribbling of urine. Reflexes absent. 20th day, cystitis. 23rd day, slight decrease of area of blunted sensation from above; extension below Poupart's ligament small. No alteration in paralysis or reflexes. Dribbling of urine for last week. Rigor followed passage of catheter. Salol given. Irrigation of bladder. 30th day, hyperæsthesia above trochanters. Cystitis less. 58th day, sensation remains the same. Says he can distinguish between heat and cold in the legs. Has had another rigor, followed by irregular temperatures for 3 days. 90th day, sensation perfect to 1 inch below umbilicus; area of blunted sensation extending 4 inches below this; localisation of sensation impaired over this area. Area of blunted sensation below Poupart's ligament still present; on outer side, sensation perfect as far as trochanter. Complains of pain along course of ilio-inguinal nerve. Urine comes in gushes. Cystitis less. 140th day, complains of pain over anterior superior spines, and also tingling and numbness in left leg from knee to ankle. Sensation loss below line drawn transversely from middle of Poupart's ligament and behind from line drawn from posterior superior spines to top of trochanters. When toes touched refers impression to corresponding groin. Limbs flaccid. No leg reflexes. Urine

dribbles. Very occasional jumps of the legs. 152nd day, complains of pain at 12th dorsal spine, which is prominent and tender. No alteration in condition until discharge on 185th day, with the exception of the urine coming in gushes and not dribbling.

4. J. A—, male, æt. 60. Printer. Fall 25 feet on to pavement. Unconscious for some time. Admitted with scalp wound in occipital region. Tenderness over 6th cervical spine but no irregularity. Complete paraplegia. Paralysis of abdominal muscles and intercostals. Reflexes all absent. Sensation impaired over the legs and abdomen, but a light touch can be located. Sense of numbness over this area and also along inner border of arms and hands. No paralysis of arms. Retention. Fæces passed unconsciously. Pupils equal; no alteration of palpebral fissure. Respiration difficult and cyanosis present. 5th day, complete loss of sensation to the level of the umbilicus, above this an area of blunted sensation reaching as far as the 3rd rib. Blunted sensation along ulnar border of arms, forearms, and hands. Retention. Vomiting. Increased difficulty of respiration with rhonchi and crepitations. P.M.—Spine fractured through disc between 7th cervical and 1st dorsal vertebræ. No displacement. First left rib fractured. Spinal membranes bruised and torn between the exits of 7th and 8th nerves. Cord severely crushed; softening extended right across. Hæmorrhage had destroyed the anterior cornua, especially upon the right side. One inch of cord involved extending downwards from the origin of the 8th cervical nerve. Heart fatty. Cirrhosis. Early chronic interstitial nephritis.

5. G. H—, æt. 55. Slipped down the steps of a bus into the road. Was brought to the hospital in a cab and carried in by constables and seated on a form; he then walked across the room, supported by two policemen, and lay down on the couch with his legs flexed and moved them freely. Scalp wound was dressed, and he walked to door and left hospital of his own accord. He made no other complaint. The following day he was admitted for paraplegia, which his wife said came on in the night. On examination, complete paralysis of intercostals, abdominal muscles, and lower extremities, with anæsthesia up to the level of the 3rd rib. Respiration entirely abdominal. Later the arms were paralysed; he became cyanosed and died in a few hours. P.M.—Spine of 6th cervical vertebra detached, carrying with it a portion of each lamina. Vertebral column was fractured through disc between 6th and 7th vertebræ; parts in apposition, but upper portions of vertebral column must have been dislocated forwards at time of accident. Small effusion of blood at site of fracture and excess of blood-stained fluid outside the membranes. Membranes not damaged. Injury to cord extended from 5th cervical to 1st dorsal roots; cord was quite pulpy and diffuent. Hæmorrhage into grey matter and also into white columns at level of 7th nerve-roots, so that nothing could be differentiated at this level. Body much decomposed.

Dislocation of cervical spine.—S. F—, male, æt. 42. Stonemason. Fell down flight of stairs; became unconscious. On admission, paralysis of lower limbs, abdominal and intercostal muscles, and also of forearm. Deltoid and shoulder muscles not affected. Complete anæsthesia up to 2nd rib. 2nd day, hands above head, elbows flexed and shoulders abducted. No deformity of neck. Cyanosis. Paralysis of muscles of trunk and lower extremities and also of

hand, forearm, and triceps. Position of forearms not recognised. Occasional fibrillar twitchings of forearms. Reflexes absent with exception of left plantar, which is obtained with difficulty. Anæsthesia to level of second rib and also over area on outer side of right arm below the middle. An anæsthetic area extends from the middle of the front of the arm down the centre of the anterior surface of arm and forearm, terminating just above the wrist. Posteriorly there is anæsthesia below the level of the middle of the arm. Anæsthetic area on inner side of left arm. Hand anæsthetic, with exception of thenar eminence at upper part. Posteriorly, anæsthesia below level of insertion of deltoid and extending upwards towards axilla on inner side. Areas could not be accurately defined. Retention. Fæces passed unconsciously. Penis turgescient, increased during passage of catheter. Pupils equal and contracted. Palpebral slits equal. No sweating phenomena. Fever. No alteration in reflexes. Anæsthetic areas extended over whole of anterior surface of right forearm and lower arm and along ulnar surface of left forearm. Death through respiratory failure on 2nd day. P.M.—Dislocation forwards of 5th cervical vertebra. Cord completely crushed between 5th and 6th nerve-roots. Pulmonary congestion with areas of apoplexy.

Ruptured liver.—Males 3. D. 3.

Fatal cases.

F. S—, male, æt. 24. Injury? Admitted collapsed; weak pulse. Shifting dulness in flanks, improved during 24 hours sufficiently to admit of operation. Dulness in flanks slightly increased. No distension of abdomen. Coeliotomy. Blood in peritoneum. Rent found in liver, plugged with gauze. Never recovered from shock of operation. Death on 2nd day. P.M.—Liver ruptured almost completely across left lobe just to the right of middle line. Rupture ran from above downwards and from before backwards. Little blood in peritoneum.

Ruptured liver and kidney; concussion.—S. S—, male, æt. 39. Knocked down and run over. Admitted semi-comatose and alcoholic. Pulse feeble. Death in a few hours. No P.M. report.

Ruptured liver and spleen.—W. C—, male, æt. 29. Knocked down by train. Admitted collapsed. Death almost immediately. P.M.—Compound comminuted fracture of lower end of right tibia and fibula. Left metatarsus crushed. Ten ounces of blood in peritoneum. Peritoneal rupture of bladder. Transverse rupture of anterior part of right lobe of liver for 4 inches. Small transverse rupture of upper end of spleen on outer surface. Mesentery of ileum stripped off bowel for 3 inches. Fractured right 3rd to 6th ribs. Hæmothorax. Separation of symphysis pubis by fractures through rami of pubes and ischium. Sacro-iliac joints wrenched apart.

Ruptured spleen.—Males 2. C. 1, D. 1.

Ruptured spleen; splenectomy.—R. H—, male, æt. 14. Sitting on bough of tree which gave way and he fell on to some big stones. Unconscious for few minutes, then walked home and was brought to the hospital. Admitted collapsed. Great pain and tenderness in hypochondriac region. Dulness in left loin which did not shift. Hæmaturia. Right Colles's fracture and greenstick fracture of left radius. Became restless after admission, dulness increased in left flank with

some on right side. Median cœliotomy 6 hours after admission, much blood escaped. Incision in left semilunar line, afterwards enlarged transversely. Spleen brought to surface, large, ruptured in two places, larger about centre of organ $1\frac{1}{2}$ to 2 inches long, the smaller $\frac{1}{2}$ inch long near the lower border. Pedicle of spleen transfixed and ligatured and organ removed. Splenic flexure of colon contused. Blood in peritoneum sponged out. Little shock during operation. Pain, restlessness, and vomiting after operation, relieved by morphia. 3rd day, vomited. Temp. 101° . Restless. Pulse became rapid. 4th day, bowels opened by enema; previous enema and Hyd. cum Cretâ ineffectual. Progress uneventful. 13th day, no bone tenderness or enlargement of glands. 26th day, glands palpable in axillæ and left groin. No bone tenderness. Discharged cured on 58th day.

Examination of blood.—4th day, red corpuscles 3,910,000. 5th day, red corpuscles 3,280,000. 4th day, white cells 22,000, hæmoglobin 83 per cent.; count made three-quarters of an hour after food. Leucocytes mainly large multinucleated variety and large lymphocytes. 8th day, red corpuscles 3,980,000, white corpuscles 26,000; count half an hour after food. Leucocytes mainly large, with few small lymphocytes. 11th day, red corpuscles 4,290,000, white corpuscles 20,000, hæmoglobin 86 per cent. 15th day, red corpuscles 4,480,000, white corpuscles 24,000, hæmoglobin 85 per cent.; proportionate numbers of white cells, lymphocytes 33 per cent., multinuclear leucocytes 53 per cent., eosinophilous cells 10 per cent., large mononuclear 4 per cent. 19th day, red corpuscles 4,280,000, white corpuscles 18,000, hæmoglobin 82 per cent. 25th day, red corpuscles 4,300,000, white corpuscles 12,000, hæmoglobin 86 per cent. 31st day, red corpuscles 4,220,000, white corpuscles 10,000, hæmoglobin 90 per cent.; lymphocytes 27 per cent., multinuclear 63 per cent., eosinophiles 3 per cent., large mononuclear 5 per cent. 39th day, red corpuscles 5,010,000, white corpuscles 12,000, hæmoglobin 82 per cent. 52nd day, red corpuscles 4,630,000, white corpuscles 12,000, hæmoglobin 92 per cent. The number of corpuscles were estimated by means of Gowers's hæmocytometer and the hæmoglobin by Fleische's hæmometer.

Fatal case.—F. G—, male, æt. 12. Injury? Admitted collapsed. Dulness in left flank; became pale and restless. Second day, median cœliotomy; blood escaped; incision in left semilunaris; spleen removed after ligature of pedicle; sponge left behind, removed on following day. Death 3rd day. P.M.—Omentum adherent to wound; beneath it plastic peritonitis gluing superficial coils of intestine together; few drachms of blood in splenic region; few ounces of blood in left pleura derived from small wound of outer surface of lung. No fractured ribs or laceration of parietal pleura.

Ruptured intestine.—Males 3. D. 3.

1. J. G—, male, æt. 52, horsekeeper. Three days before admission fell down, and a man with him fell across his abdomen. Complained of pain in abdomen, but went home. Castor oil taken on following day without effect. Vomiting began 24 hours after the accident, with severe abdominal pain, which lasted until admission. On examination, abdomen distended and rigid, and generally tender; no dulness; condition fair. Median cœliotomy on 3rd day after accident; peritonitis and fæcal matter; two perforations at lower part of ileum found, and sutured by Lembert's stitches; irrigation of abdomen with sterilised water; drainage-tube inserted. Vomiting continued after operation. Pulse

became feeble and face grew pinched. Death on 2nd day. P.M.—General peritonitis; no free fluid. The upper rent was transverse to the bowel, measuring 1 inch, and situated 9 inches from ileo-cæcal junction; the lower rent was 1 inch in extent, and longitudinally situated 3 inches nearer the cæcum. Suturing perfect.

2. J. W—, male, æt. 49, carman. Struck by pole of van in left side, being pinned between the pole and the wall. Admitted with little shock; complained of great pain in left iliac fossa, with tenderness and dulness here. Vomited after admission. Morphia given. Pain and tenderness relieved. Third day pain returned, and vomited once. Temp. 101° ; pulse strong. Restless during night and got out of bed, and then became collapsed, with feeble running pulse and laboured respiration. Impaired vocal fremitus and friction over base of left lung in front. Improved after morphia given. Fourth day, vomited again, and abdomen became distended; partial obliteration of liver dulness, and rapidly sank, so that his condition forbade any operative interference. No general abdominal tenderness or abdominal facies until just before death. P.M.—General suppurative peritonitis; layer of fibrin on left side of vault of diaphragm accounted for friction heard during life. Peritonitis most intense in left iliac fossa. Clean rupture of intestine, 5 feet from duodenum and $\frac{1}{2}$ inch in diameter, situate at the free border of the gut. Fæcal extravasation.

3. *Retro-peritoneal rupture of duodenum.*—E. D—, male, æt. 19. Thrown off van, the wheels of which passed over his abdomen. Admitted with shock and feeble pulse. Restlessness. No vomiting or shifting dulness in abdomen. Later, emphysema of the abdominal wall was noted and free gas in peritoneum. Median cœliotomy. Mesentery found emphysematous and crepitant. Ascending colon found full of blood. No rent of bowel was found. Shock supervened during operation, from which patient never revived. Death occurred in few hours. P.M.—Emphysema of scrotum and abdominal walls. Rupture of abdominal wall between umbilicus and sternum, just to right of middle line. Intestines injected. Rent on posterior non-peritoneal surface of duodenum $2\frac{1}{2}$ inches from pylorus, measuring $\frac{1}{2}$ inch. Retro-peritoneal tissues on right side full of gas, soft and sloughy; gas had spread from retro-peritoneal tissue round abdominal wall to rent, and then became free in peritoneal cavity, and thence spread to scrotum along inguinal canals. Right hæmothorax.

Foreign body in stomach; gastrotomy.—H. M—, male, æt. $2\frac{1}{2}$. Swallowed a halfpenny. Child complained of pain in the neck; coin could not be felt. A coin-catcher was passed, but through a sudden movement of the child broke at the junction of metal and whalebone. Child admitted, and attempt made under chloroform to locate the coin-catcher without avail. By means of the X rays the coin-catcher and the halfpenny were both seen to be in the stomach. Median cœliotomy performed on 2nd day, and stomach opened after peritoneum shut off by gauze. Stomach incised and foreign bodies removed with some little difficulty. Stomach closed by double row of Lembert's sutures. Shock during operation. Rectal feeding. Temperature rose to 103° , and the child restless and thirsty. Fluids given by mouth following morning, but child rapidly sank and died. P.M.—Suturing perfect.

Wound of perinæum and rectum, with prolapse of bowel.—H. H—, female, æt. 8. In jumping over a chair with a broken back, impaled herself on jagged

upright at back of seat. Seen an hour later by friends; hæmorrhage and prolapse of bowel. On admission, shock and great pain. Several coils of small intestine were protruding through the wound of the perinæum. Vomited. Gut cleansed and replaced under chloroform and plug of gauze inserted. Five hours later, under chloroform, found that besides the wound in perinæum there was a longitudinal slit, $1\frac{1}{2}$ inches long, on the anterior wall of the rectum, communicating with the peritoneum. Vagina separated from perinæum, but otherwise intact. Gut prolapsed again. Median cœliotomy, and the gut drawn back into abdomen; it was coated with lymph. Rent in rectum and perinæum sutured. Abdominal cavity irrigated with sterilised water and drainage-tube inserted. 2nd day, slight distension of abdomen, which moved badly. 3rd day, distension greater; vomited twice; Mag. Sulph., 1 dr., given by mouth; long rectal tube passed and warm water injection; flatus passed, no fæces. 4th day, distension less; castor oil given; bowels open on following day. 5th day, discharge from tube, fæcal odour. 6th day, fæces passed unconsciously. 7th day, fæces escaped from abdominal wound on this and the following day. Gradual improvement in general condition after 3rd day. Wound in perinæum healed well, and incontinence of fæces ceased on 24th day. Discharged cured on 35th day. Admitted few days later with abdominal pain apparently due to error of diet.

Ruptured bladder.—T. E. J—, male, æt. 5. Run over by tram, being crushed by wheel-guard. Admitted collapsed. Lacerated wound of right groin and of perinæum. Slight hæmorrhage from urethra. Fractured radius and ulna. Injection of boracic lotion into bladder did not return. Supra-pubic exploration of bladder. Pre-vesical tissue œdematous, taken for bladder, and wound closed. Death 24 hours after accident. P.M.—Retro-pubic space infiltrated with bloody fluid, forming space size of Tangerine orange. Intra-peritoneal rupture of fundus of bladder. Shreds of lymph in retro-vesical pouch. No general peritonitis. Sacro-iliac synchondroses wrenched apart, with splintering of right margin of sacrum.

Fractured pelvis.—Males 6. C. 5, D. 1. Of crest of ilium 4; of ramus of pubes 1; of rami of ischia 1.

Fatal case.—F. E—, male, æt. 42. Struck in back by engine buffer. Admitted collapsed. Death in few hours. P.M.—Compound fracture of pelvis; tubera ischia separated by fracture through rami of pubes. Urethra intact. Cartilages of three left lower ribs fractured. Heart fatty.

INJURIES OF UPPER EXTREMITY.

Wounds of forearm and hand.—Males 31, females 9. C. 37, R. 3. Divided flexor profundus and sublimis 7; flexor sublimis 1; flexor profundus 1; extensor communis digitorum 8; extensor minimi digiti 1; extensor secundus internodii poll. 1. Radial traumatic aneurysm 1.

Treatment.—Suture of tendons, amputation of little finger 1; with metacarpal 1, excision of aneurysm. Amputation of forearm 2. Amputation of arm for cellulitis 1.

Foreign body.—Males 5, females 8. C. 12, R. 1. Needle in hand 7, bullet 4, glass 1. Skiagram showed 12. Extracted in 12.

Divided median nerve.—Recent 1; old 1. With divided flexor tendons 1; completely divided 1. Immediate suture 1; at own request 1.

Divided ulna.—Recent 2; old 2. Ulnar artery divided 2. Immediate suture 2; suture after resection 1; attempted suture 1.

Divided posterior interosseous.—Old 1. Nerve partially divided. Suture after resection 1.

Injury to brachial plexus.—Old 1. Fracture of clavicle and ribs; inner cord chiefly affected. Resection of clavicle; rapid improvement.

Dislocation of humerus.—Male 1, females 2. C. 2, R. 1. Subcoracoid 3. Reduction under anæsthetic, of 3 weeks' duration; attempted reduction under anæsthetic, 2 months; excision of head, 2 weeks.

Dislocation of radius and ulna.—Males 3. C. 2, R. 1. *Duration.*—3 weeks 1; recent 2. Backwards 2; backwards and outwards, with fracture of olecranon, 1; reduction 2; forcible movement and massage 1. Compound dislocation of wrist in one case as well, followed by emphysematous gangrene and amputation in lower third of arm.

Fractured humerus.—Males 5, females 2. C. 6, D. 1. Upper third 1; middle third 2; lower third 2; anatomical neck 2.

Treatment.—Plaster splints 4; internal angular 1; bandage 2.

Fatal case.—J. W—, male, æt. 45. Fractured anatomical neck. Emphysema and broncho-pneumonia; dilated heart; liver fatty.

Compound comminuted.—Males 2, female 1. C. 2, R. 1. Upper third 1; lower third 1; T-shaped 1. Elbow-joint opened 2. Crushed hand 1.

Treatment.—Antiseptics and internal angular splint. No union in one, followed later by amputation.

Compound comminuted fracture of radius and ulna.—Male 1. C. 1.

Treatment.—Amputation of arm in lower third.

INJURIES OF LOWER EXTREMITY.

Foreign body.—Males 4, females 5. C. 6, R. 1, U. 2. Needle in foot 5; needle in knee 2; bullet in leg 2, same case. Extraction in 6. Skiagram showed body in 9.

Penetrating wounds of knee.—Males 2. C. 1, R. 1. Antiseptics to wound, rest; splints and massage. Septic arthritis after punctured wound of knee with chisel. Arthrotomy and drainage. Discharged with moveable joint.

Dislocation of hip.—Male 1. D. 1. W. F—, male, æt. 43, shunter. Knocked down and run over by train. Admitted collapsed, with pubic dislocation of right hip. Head lying on pubic ramus, and limb rotated outwards, so that foot looks backwards. Multiple fractures. Death in few minutes. P.M.—Capsule of right hip torn away from femur, tendon of the ilio-psoas only remaining attached to femur. Fractured humerus, left upper third; compound comminuted fracture of left tibia and fibula in lower third. Fractured left femur at middle; pia arachnoid hæmorrhage on either side of longitudinal fissure. Left hæmothorax. Fractured 3rd to 10th ribs. Right ribs 1st to 6th and clavicle fractured. Fractured spine between 8th and 9th dorsal vertebræ.

Fractured shaft of femur.—Males 60, females 21. C. 81. Direct violence 13; indirect violence 68. Upper third 23; middle third 38; lower third 29. Separation of lower epiphysis 1; dislocation of knee 1; fractured humerus 1; ulcer of leg 2; with ankylosis of knee 1; T-shaped fracture of condyles 1; greenstick fracture 1; patella dislocated 1.

Treatment.—Plaster-of-Paris only 28; plaster-of-Paris and long outside 9; plaster-of-Paris, long outside, and extension 41; Hamilton's splint 1; Macintyre's and plaster-of-Paris 1; gutta-percha splint 1; resection and screwing of fragments 1. Shortening noted: $\frac{1}{8}$ inch 1, $\frac{1}{2}$ inch 2, 1 inch 2. Delayed union 1; pegged 1.

Compound fracture of femoral shaft.—Male 1. C. 1. Direct violence, lower third, 1. Delayed union 1.

Treatment.—Antiseptics, plaster-of-Paris and extension, Thomas's splint.

Comminuted fracture of femoral shaft; ruptured popliteal artery.

Fatal case.—R. H—, male, æt. 45. Run over by van. Admitted collapsed, with comminuted fracture of femur in lower third, and compound fracture of two left metacarpals. Death in few hours. P.M.—Left femur comminuted 2 inches above condyles; lower fragment displaced upwards and inwards. Transverse rupture of popliteal artery. 7th rib with cartilage fractured. Mitral incompetence and hypertrophy of left ventricle. Hæmatoma of abdominal wall. Liver fatty. Contusion of left kidney. Chronic interstitial nephritis. Atheroma of basilar artery.

Compound comminuted fracture of femur.—Males 2. D. 2.

1. J. P—, male, æt. 64. Railway smash. Admitted collapsed, with compound comminuted fracture of left and comminuted fracture of right femur. Fractured

right clavicle and ribs. Death in few hours. P.M.—Both femora comminuted in lower third; structures in front of left fracture pulped; lower fragments displaced backwards. Right 2nd, 4th, and 5th ribs fractured at centre. Manubrium sterni separated. Fractured right clavicle. Compound linear fracture of right occipital bone. Liver fatty.

2. *Spreading traumatic gangrene*.—E. P—, male, æt. 18, groom. Pony trap being hauled to loft fell on to right thigh. Admitted with compound comminuted fracture of right femur in middle third. Small fragment of bone removed and wound cleansed and limb put up in plaster-of-Paris with extension. Very restless during night, getting out of bed. Temperature rose to 103°, with rapid feeble pulse. Offensive odour noted through splint. Splint removed, and gas escaping from wound, with emphysematous gangrene extending to lower right abdomen. Strychnine and brandy given hypodermically. Infusion of 2 pints of saline with 2 ounces of brandy. Death 24 hours after admission. P.M.—Gangrene had extended after death over abdomen, thorax, and right half of scrotum. Wound dry and sticky. Kidneys and liver honeycombed with gas-containing cavities.

Fractures of femoral neck.—Males 6, females 5. C. 3, R. 7, U. 1. Old 3; recent 8. Impacted 7; unimpacted 4. Unimpacted showed union in 1. Shortening $\frac{1}{2}$ inch 2, 1 inch 1, $1\frac{3}{4}$ inches 1. Ovarian cyst 1.

Treatment.—Reduction of impaction 1; plaster-of-Paris and extension 2; long outside 1; long outside and extension 1; sandbags 4; sandbags and extension 1; passive movement 1; massage 1.

Fractured patella.—Males 34, females 7. C. 35, R. 6. Right 18; left 22; not stated 1. Direct violence 10; indirect violence 31; muscular violence 1. Comminuted 3. Refracture in 6. Previous wiring 37, 59, 91, and 165 days respectively in advance of refracture. Two previous fractures in one case 4 years ago, when patella wired; three previous fractures in one case, with wiring, 4 years ago. Fracture below previous ununited fracture 1; previous fracture of opposite patella 1. Old fractures 3.

Treatment.—Recent wiring 24; wiring of old case 2; pegging of old case 1; remainder by Macintyre, and icebag followed by plaster-of-Paris, with exception of old case treated by leather splint.

Fracture of tibia and fibula.—Males 54, females 25. C. 78, D. 1. Right 40; left 36; 3 not stated. Direct violence 12; indirect violence 67. Upper third 2; middle third 4; lower third 62 (including 17 Pott's fractures); remainder tibia and fibula at different levels. Dislocation of upper end of fibula 1. Delirium tremens 2. Fractured metatarsals 1. Ruptured anterior tibial artery 1.

Treatment.—Neville at first 2; remainder by plaster-of-Paris; massage to recent fracture in 2 cases.

Fatal case.—E. P—, male, æt. 59, wood-sawyer. Branch of tree fell on leg. Admitted with large extravasation of blood in popliteal space, which rapidly increased. Tibial pulse absent. Fracture of tibia and fibula in upper third. Ligature of popliteal artery. Second day, slight circulation in limb. Gangrene appeared on 3rd day and rapidly spread. Amputation of thigh in lower third. Fever after amputation, and wound suppurated badly. Vomiting. Restlessness at night. Patient gradually sank. Death on 9th day. P.M.—Flaps sloughy.

Lymphangitis. Aortic atheroma. Healed tubercle at apices. Right pleural adhesions.

Comminuted fractures of tibia and fibula.—Males 4, female 1. C. 5. Becoming secondarily compound 1. Direct violence 2; indirect violence 3. Middle third 1; lower third 4.

Treatment.—Neville followed by plaster-of-Paris 1; plaster-of-Paris 3; amputation of leg in upper third 1.

Compound fractures of tibia and fibula.—Males 14, females 3. C. 16, D. 1. Direct violence 8; indirect violence 9. Upper third 1; middle third 2; lower third 13. Crushed foot 1.

Treatment.—Screwed 1; wired 1; amputation of thigh 1; Syme's amputation 1; remainder by antiseptics and plaster-of-Paris.

Fatal case.—E. V—, male, æt. 24, porter. Run over by train. Admitted collapsed. Compound fracture of left tibia and fibula. Compound subastragaloid dislocation with fracture of tarsus. Compound fracture of right tarsus. Shock diminished after admission. Amputation of lower third of left thigh and Syme's amputation. Much shock. Infusion $2\frac{1}{2}$ pints on table; slight improvement. Failed later; infusion repeated, 2 pints. Death 4 hours after operation. P.M.—Pleural adhesions.

Compound comminuted fractures of tibia and fibula.—Males 11, females 2. C. 10, R. 1, D. 2. Right 6; left 5; right and left 2. Direct violence 8. Upper third 3; middle third 2; lower third 8. Wounds of ankle-joint 1.

Treatment.—Antiseptics and plaster splints 6; wired 2; primary amputation of leg 2; secondary amputation of leg 1; primary amputation of thigh 1; grafted 2.

Fatal cases.

1. J. P—, male, æt. 64, watchman. Run over by train. Admitted collapsed. Compound comminuted fracture of left leg. Fracture of right tibia and clavicle. Several ribs fractured. Death 6 hours after accident. No P.M. report.

2. H. N—, female, æt. 67. Run over by van. Admitted with great shock. Compound comminuted fracture of right tibia and fibula in upper third; skin stripped up. Fractured right ribs, 2nd to 7th. Crushed little finger. Stimulants given. Great respiratory difficulty. Death in few hours. P.M.—Chronic interstitial nephritis. Healed tubercle at apex.

Fracture of tibia.—Males 13, females 9. C. 22. Right 12; left 10. Direct violence 5; indirect violence 17. Upper third 4; middle third 2; lower third 15; separation of upper epiphysis 1.

Treatment.—Neville followed by plaster splints 3; Neville followed by Macintyre 1; remainder by plaster-of-Paris splints.

Compound fracture of tibia.—Males 4. C. 4. Left 4. Direct violence 2; indirect violence 2. Wound of knee-joint 1.

Treatment.—Antiseptics and plaster splints.

Fracture of fibula.—Males 19, female 1. C. 19, D. 1. Direct violence 2 (lower third 19, middle third 1), including 4 Pott's fractures.

Treatment.—Plaster-of-Paris splints in all, with massage in 1 case.

Fatal case.—F. H—, male, æt. 35. Pott's fracture, fibula. Delirium tremens.

Temperature rising to 105.8° . P.M.—Cirrhosis of liver. Interstitial and tubal nephritis. Emphysema. Lepto-meningitis.

Compound dislocations of ankle.—Male 1, female 1. C. 1, D. 1. Fracture of tibia and fibula 2.

Treatment.—Reduction and antiseptics, with removal of comminuted fragments of bone, followed by excision of ankle, in 1.

Fatal case.—*Vide* Special Table III, "Tetanus."

Compound dislocation of astragalus. Male 1. D. 1.

G. P—, male, æt. 54, stablekeeper. Thrown out of trap. Foot strongly inverted, with astragalus protruding through wound at inner and anterior aspect of ankle. Astragalus excised; reduction impossible until removal of external malleolus, which caught on sustentaculum tali. Drained. Wound suppurated. Temperature varying between 99° and 103° . Cough. Gradual increasing weakness. Amputation of leg in upper third on 21st day. Death in few hours. P.M.—Lungs congested and œdematous. Left pleuritic effusion. Few apical adhesions.

Compound subastragaloid dislocation.—See Special Table III.

Vicious union of femur.—Males 2, females 3. C. 2, R. 2, U. 1. Upper third 2; middle third 1; not stated 2. Interval since fracture: 9 days 1, 16 days 1, 6 months 1, 9 months 1.

Treatment.—Multiple osteotomies 1; wrenching under chloroform, followed by plaster splints, 3; at own request 1.

SPECIAL TABLES.

SPECIAL TABLE I.—

INGUINAL HERNIA.—*a. Strangulated*

No.	Occupation.	Sex.	Age.	Side.	Duration of hernia.	Duration of strangulation.	Structure of hernia.
1	Marble polisher	M.	56	L.	30 years	6 hours	?
2	—	M.	1½	R.	16 months	6 hours	?
3	—	M.	69	R.	29 years	1 day	?
4	—	M.	62	R.	4 years	4 hours	?
5	Decorator	M.	51	L.	12 years	2 hours	?
6	—	M.	11 months	L.	?	?	?
7	Gardener	M.	57	R.	?	Few hours	?
8	Dealer	M.	42	R.	?	Few hours	?
9	Scholar	M.	6	R.	6 years	6 hours	?
10	—	M.	5 months	R.	Congenital	Few hours	?
11	—	M.	2	R.	1½ years	22 hours	?

b. Strangulated Irreducible.

12	Baker	M.	18	R.	5 hours	5 hours	Funicular
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c. Strangulated Irreducible

13	Electrotyper	M.	30	L.	6 months	24 hours	Congenital
14	Barman	M.	23	R.	3 years	1½ hours	Enterocoele
15	Farrier	M.	62	R.	19 years	11 hours	Enterocoele

HERNIA.*Irreducible. No operation.*

Treatment.	No. of days in hospital.	Result.	Remarks.
Reduction by taxis under anæsthesia. Truss	8	C.	Melæna after reduction.
Hot bath, taxis	1	C.	
Taxis	2	C.	
Hot bath. Spontaneous reduction	40	C.	
Hot bath, taxis	1	C.	
Hot bath, icebag, taxis	1	C.	
Hot bath, icebag. Spontaneous reduction	5	C.	
Hot bath, taxis	1	C.	
Hot bath, taxis	1	C.	
Hot bath. Spontaneous reduction	1	C.	
Hot bath. Spontaneous reduction	4	C.	

Reduction followed by Radical Cure.

Hot bath. Spontaneous reduction. Radical cure after 19 days. Sac ligatured and ablated with silk. Pillars sewn with goldbeater's skin	19	C.	Epilepsy.
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Herniotomy and Radical Cure.

Congested omentum and transverse colon replaced. Sac ligatured with silk and ablated. Pillars sewn with goldbeater's skin	19	C.	
Small gut replaced. Macewen's method. Pillars sewn with gold- beater's skin	17	C.	Gut slightly congested.
Small gut replaced. Sac ablated with silk. Macewen's stitch with gold- beater's skin	21	C.	Clear fluid in sac. Gut plum-coloured; difficulty in reduction.

No.	Occupation.	Sex.	Age.	Side.	Duration of hernia.	Duration of strangulation.	Structure of hernia.
16	Labourer	M.	45	R.	4 years	8½ hours	Epiplocele
17	Engine fitter	M.	50	L.	5 years	5 hours	Entero-epiplocele
18	Porter	M.	17	R.	10 years	3 hours	Entero-epiplocele
19	Nil	F.	72	R.	2 years	2 days	Entero-epiplocele
20	Nil	F.	38	R.	5 years	2 days	Epiplocele
21	Nil	F.	23	L.	2 years	3 hours	Enterocoele, congenital
22	Firewood dealer	M.	43	?	11 years	1 day	Congenital
23	Cabman	M.	59	R.	25 years	6 hours	Enterocoele
24	Draper	M.	46	L.	23 years	9 hours	Epiplocele
25	Printer's labourer	M.	44	R.	9 years	32 hours	Epiplocele, congenital
26	Labourer	M.	44	R.	4 years	6 days	Epiplocele
27	Leather dresser	M.	52	R.	25 years	2 days	Epiplocele
28	Plateman	M.	38	L.	14 years	6 days	Enterocoele
29	Horsekeeper	M.	50	R.	8 years	10 hours	Enterocoele

Treatment.	No. of days in hospital.	Result.	Remarks.
Omentum ablated. Sac ligatured and partially ablated. Pillars sewn. Goldbeater's skin used throughout	20	C.	
Omentum ablated. Small gut replaced. Kocher's method of treatment to sac. Pillars sewn. Silk used throughout	34	C.	Gut deeply congested; omentum adherent to sac. Attack of obstruction 16 days after operation. <i>Vide</i> "Summary of Diseases."
Omentum ablated. Small gut replaced. Sac ligatured with silk and ablated. Pillars sewn with goldbeater's skin	18	C.	
Omentum ablated. Sac ablated. Silk used throughout. Pillars not sewn	22	C.	Gut plum-coloured. Omentum closely adherent to sac.
Omentum ablated. Sac ligatured with silk and ablated. Pillars sewn with kangaroo tendon	27	C.	Clear fluid in sac.
Congested small gut replaced. Sac ligatured with silk and ablated. Macewen's stitch with kangaroo tendon	15	C.	Constriction at internal abdominal ring.
Small gut replaced. Ablation of sac. Pillars sewn. Silk throughout	14	C.	
Congested small gut replaced. Sac ablated with silk. Pillars sewn with goldbeater's skin	21	C.	
Omentum ablated. Sac ligatured and ablated. Pillars sewn. Silk throughout	16	C.	Omentum deeply congested.
Large mass of omentum removed. Kocher's method to sac. Pillars sewn with kangaroo tendon. Castration	67	C.	Testicle atrophied. Deep suppuration.
Omentum ablated. Sac ligatured and ablated. Pillars sewn. Silk used throughout	11	C.	
Congested omentum ablated. Sac ablated with silk. Macewen's stitch with kangaroo tendon	23	C.	
Congested small gut replaced. Sac ablated with silk	38	C.	Gradual onset of symptoms of strangulation.
Small gut replaced. Sac ablated and ligatured with silk. Pillars by Macewen's method with kangaroo tendon	15	C.	Hæmorrhage into mesentery and wall of gut, rendering reduction difficult.

No.	Occupation.	Sex.	Age.	Side.	Duration of hernia.	Duration of strangulation.	Structure of hernia.
30	Cabman	M.	75	R.	6 years	?	?
31	Fishmonger	M.	52	L.	18 months	27 hours	Enterocoele
32	Carpenter	M.	40	L.	10 years	3 hours	Enterocoele
33	Whitesmith	M.	37	R.	20 years	6 hours	Enterocoele
34	Labourer	M.	34	R.	19 years	3½ hours	Enterocoele

d. Strangulated Irreducible.

35	Nil	F.	65	R.	2 years	10 days	Enterocoele
36	Nil	M.	69	R.	15 years	8 hours	Enterocoele
37	Nil	M.	11 months	R.	?	5 days	Enterocoele
38	Whitesmith	M.	45	R.	? years	24 hours	Enterocoele; recurrent hernia

e. Strangulated Irreducible.

39	Labourer	M.	25	R.	1 week	1 week	Congenital
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Treatment.	No. of days in hospital.	Result.	Remarks.
Sac ligatured and ablated. Pillars sewn with silkworm gut	14	C.	
Small bowel replaced. Sac ligatured and ablated. Pillars sewn. Silk used throughout	46	C.	Clear fluid in sac.
Small bowel replaced. Kocher's treatment of sac with ablation of excess	40	C.	Constriction by band in sac. Two feet of small gut strangulated.
Small bowel replaced. Well-marked constriction ring. Sac ligatured and ablated. Pillars by Macewen's method with kangaroo tendon	17	D.	P.M.—Cause of sudden death not found. Died suddenly with heart failure.
Small gut intensely congested. Sac ablated. Pillars sewn with gold-beater's skin	4	D.	P.M.—General peritonitis. Three feet of ileum intensely congested, almost black. Gloss still present.

Herniotomy only.

Small gut deeply congested; replaced. Sac sutured	23	C.	Progress good throughout.
Sac contained loop of small gut strangulated	31	C.	Cæcum and part of ascending colon also in sac, not strangulated, but irreducible.
Small gut congested; replaced. Collapsed. Death on table	1	D.	P.M.—Constriction 4 inches above ileo-cæcal valve. Gut recoverable, surrounded by ring of hæmorrhage and local peritonitis.
Small gut congested; replaced. Three enormous coils with much clear fluid	1	D.	P.M.—Terminal 6 feet of ileum with cæcum and half of appendix strangulated. Small gut dark but recoverable. Blood inside bowel.

Herniotomy and Fæcal Fistula.

Six inches of gut gangrenous. Sac contained fæces. Inflamed integuments. Stricture divided and gut laid open	6	D.	P.M.—Opening in ileum 6 inches from cæcum. Death from exhaustion.
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FEMORAL HERNIA.—*a. Strangulated Irre*

No.	Occupation.	Sex.	Age.	Side.	Duration of hernia.	Duration of strangulation.	Structure of hernia.
1	Nil	F.	50	L.	15 years	24 hours	Epiplocele
2	House-work	F.	41	R.	6 years	24 hours	Enterocoele
3	Nil	F.	86	L.	3 years	5 days	Enteropiplocele
4	House-work	F.	59	L.	13 years	2 days	Enteropiplocele
5	Nil	F.	60	R.	2 years	2 days	Enteropiplocele
6	Labourer	M.	48	R.	3 years	1 day	Enteropiplocele
7	House-work	F.	52	L.	6 years	1 day	?
8	House-work	F.	45	R.	? years	1 day	Enterocoele
9	Nil	F.	77	R.	?	5 days	Epiplocele
10	House-work	F.	54	L.	7 years	3 days	Enteropiplocele
11	House-work	F.	49	R.	1 day	1 day	Enterocoele
12	House-work	F.	33	L.	18 months	2 days	Enterocoele
13	House-work	F.	59	R.	5 years	48 hours	Epiplocele
14	Blacksmith	M.	57	R.	Years	2 days	Enterocoele
15	Coachsmith	M.	63	R.	8 days	8 days	Enteropiplocele

ducible. Herniotomy and Radical Cure.

Treatment.	No. of days in hospital	Result.	Remarks.
Omentum ablated. Kocher's treatment of sac. Flap of pectineal fascia	14	C.	
Congested small gut with well-marked constriction rings replaced. Kocher's radical cure	14	C.	Lymph in sac. Gut almost black.
Omentum and small gut replaced. Sac ligatured and ablated	21	C.	
Omentum ablated. Congested small gut replaced. Sac ligatured and ablated. Crural ring sewn. Pectineal flap	39	C.	Much fluid in sac.
Omentum ablated. Small gut replaced. Kocher's method to sac	13	C.	Gut deeply congested.
Omentum ablated. Congested small gut replaced. Sac treated by Mac-ewen's method	15	C.	Well - marked constriction rings. Omentum adherent to sac.
Sac found empty. Kocher's method to sac	23	C.	
Congested small gut replaced. Sac ligatured and ablated	15	C.	
Congested omentum ablated. Sac ligatured and ablated	18	C.	
Small gut replaced. Omentum ablated. Sac twisted and ablated	14	C.	Gut purple colour; well-marked constriction rings.
Small gut replaced. Sac ligatured and ablated	21	C.	Gut deeply congested.
Small gut deeply congested. Well-marked constriction rings. Sac ligatured and ablated	11	C.	
Gangrenous omentum ablated. Sac ligatured and ablated	22	C.	Progress good.
Congested small gut replaced. Sac ligatured and ablated	1	D.	Paralytic distension of gut. P.M.—Discoloured area in ileum. No peritonitis.
Large mass of omentum ablated. Gut congested. Sac ligatured and ablated	9	D.	Vomiting and distension started day before death. P.M.—Distension of large and small intestine.

b. Strangulated Irreducible

No.	Occupation.	Sex.	Age.	Side.	Duration of hernia.	Duration of strangulation.	Structure of hernia.
16	House-work	F.	54	R.	?	4 days	Entero-epiplocele
17	Nil	F.	56	R.	?	?	Enterocoele

c. Strangulated Irreducible

18	Housekeeper	F.	30	R.	4 years	5 days	Enterocoele
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UMBILICAL

a. Strangulated Irreducible

1	House-work	F.	42	—	?	3 days	?
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b. Strangulated Irreducible

2	House-work	F.	53	—	1 day	1 day	Enterocoele
3	House-work	F.	47	—	14 years	31 hours	Entero-epiplocele

Herniotomy only.

Treatment.	No. of days in hospital.	Result.	Remarks.
Omentum ablated. Congested small gut with well-marked sulcus replaced	5	D.	Diarrhœa on second day, continuing till death. P.M.—Strangulation 3 feet above cæcum. Gut dark and wanting in polish over 3 inches. Obvious sulcus. No ulceration of mucous membrane. Chronic interstitial nephritis.
Small gut deeply congested, replaced. Cœliotomy and fæcal fistula formed on second day	3	D.	Vomiting continued after herniotomy. P.M.—Strangulated loop 12 feet from duodenum. Intestines distended. Chronic interstitial nephritis.

Herniotomy, Resection, and Suture.

Two inches of small gut tightly nipped. Constriction rings almost perforated. Resection of loop. Circular enterorrhaphy. Interrupted Lembert's suture	1	D.	P.M.—Sharp U-bend 1 foot from cæcum. No obstruction in lumen. Suture perfect. No peritonitis.
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HERNIA.*No Operation.*

Reduced by taxis under anæsthesia	12	C.	Recurrent hernia.
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Herniotomy and Radical Cure.

Congested small gut returned. Sheath of rectus sewn	24	C.	Previous herniotomy and radical cure 6 months previously.
Congested small gut replaced. Omentum ablated. Sac twisted and ablated. Fascia sewn	27	C.	

APPENDIX TO SPECIAL TABLE I.—

Initials.	Occupation.	Age.	Sex.	Side.	Duration of hernia previous to 1st operation.	Nature of primary hernia.	Method of radical cure of primary hernia.	Course of healing of primary hernia.	Interval since primary rad. cure.
C. P.	Seaman	28	M.	L.	11 months	Reducible inguinal, omental	Sac ablated and ligatured; pillars and conjoined tendon sewn with silk	First intention	16 months
F. W.	Ship's steward	29	M.	L.	7 years	Reducible inguinal	Sac ligatured and ablated; pillars sewn with silk	First intention	4 years
G. W.	Chair-maker	41	M.	L.	2 years	Reducible inguinal	Sac ligatured and ablated; pillars sewn	Suppuration	5 months
H. E. C.	Constable	23	M.	R.	?	Reducible inguinal	Sac ligatured and ablated; pillars sewn with silk	First intention	8 months
P. F.	Fireman	20	M.	R.	? months	Reducible inguinal	Kocher's. Macewen's stitch with silk	Suppuration	2½ years
R. K.	Engineer	16	M.	L.	15 years	Congenital, reducible inguinal	Sac ablated and ligatured; pillars sewn with silk; castration	First intention	10 months
W. W.	Labourer	17	M.	R.	2 weeks	Reducible inguinal, encysted	Kocher's method with catgut and kangaroo tendon	First intention	8 months
A. P.	Labourer	20	M.	L.	3 months	Reducible inguinal	? Operation at Salisbury Infirmary	?	14 months
W. W.	Brick-layer	33	M.	R.	6 years	Reducible inguinal	? Operation at Chatham Hospital	Suppuration	2 years
W. H. S.	Carman	35	M.	L.	6 days	Reducible inguinal	Kocher, with ablation of sac after suture to external oblique; canal sewn with silk-worm gut	First intention	7 months

Statement of Recurrent Hernia.

Nature of recurrent hernia.	Duration of recurrent hernia.	Method of radical cure of recurrent hernia.	Course of healing.	Remarks.
Reducible inguinal	6 weeks	Sac ablated and ligatured; pillars sewn with silk	First intention	
Reducible inguinal, scrotal	? 3 years	Kocher's. Sac secured with silk to external oblique; remainder removed	Suppuration	Tuberculous glands of groin excised 4 years previously.
Reducible inguinal	2 weeks	Truss	—	Double hernia, both primarily operated upon.
Reducible inguinal, incomplete	6 weeks	Sac ablated	Slight suppuration	Very small hernia.
Irreducible inguinal, incomplete	4 days	Sac ligatured and ablated; pillars sewn with goldbeater's skin	Suppuration	Adherent omentum in second operation.
Reducible inguinal	?	Sac ligatured and ablated; Macewen's stitch with kangaroo tendon	First intention	
Reducible inguinal	5 months	Suture of muscular wall	First intention	Bulging of abdominal wall. No sac found.
Reducible inguinal, scrotal	1 year	Omentum ligatured and ablated; sac ligatured and ablated; pillars sewn with silk	Suppuration	Sac much matted. Had bad radical cure for right hernia, which had afterwards recurred, and again been treated by radical cure.
Reducible inguinal, congenital	1½ years	Sac ligatured and ablated; pillars sewn with silk	First intention	Congenital sac found at operation for recurrent hernia.
Reducible inguinal	? weeks	Truss	—	

Initials.	Occupation.	Age.	Sex.	Side.	Duration of hernia previous to 1st operation.	Nature of primary hernia.	Method of radical cure of primary hernia.	Course of healing of primary hernia.	Interval since primary rad. cure
J. C.	Fish-monger	51	M.	L.	11 months	Reducible inguinal	Kocher	Suppuration	6 months
J. E. S. M.	Soldier	26	M.	L.	5 years	Reducible inguinal	Sac ligatured and ablated; pillars sewn with silk	First intention	—
A. W.	Engineer	31	M.	L.	1 year	Reducible inguinal	Sac ligatured and ablated	First intention	2½ years
S. S.	Fireman	27	M.	L.	10 months	Reducible inguinal, incomplete	Sac ligatured and ablated; pillars sewn with kangaroo tendon	First intention	3½ years
E. H.	Char-woman	36	F.	L.	2 years	Irreducible femoral	Ablation of sac	First intention	7 years
E. A. F.	Needle-woman	63	F.	L.	30 years	Irreducible femoral, ulceration	Ablation of sac; fascia sewn	First intention	2 years
A. S.	House-work	53	F.	—	5 years	Strangulated umbilical	Omentum ablated; fascia sewn	First intention	6 months

Nature of recurrent hernia.	Duration of recurrent hernia.	Method of radical cure of recurrent hernia.	Course of healing.	Remarks.
Reducible inguinal	Weeks	Truss	—	Weak abdominal wall.
Reducible inguinal	—	Canal slit up and then sewn; sac sewn	First intention	
Reducible inguinal	Few weeks	Truss	—	
Reducible inguinal	Few weeks	Truss	—	
Strangulated irreducible femoral	2 years	Omentum ablated. Kocher	First intention	Hydrocele of hernial sac at first operation. Strangulated hernia reduced by taxis.
Irreducible femoral	?	Sac ligatured and ablated; flap from external oblique	Suppuration	Ulcer over hernia excised. Third recurrence after radical cure. Intestines closely adherent to sac.
Strangulated umbilical	1 day	Sheath of rectus sewn; omentum ablated	First intention	

SPECIAL TABLE II.—*Erysipelas*

No.	Sex.	Age.	Disease for which admitted.	Ward in which it arose.	Duration in hospital before attack.	Probable cause of attack.	Month.
1	F.	61	Recurrent scirrhus of breast	Elizabeth	21 days	Excision of glands	February
2	F.	56	Scirrhus of breast	Beatrice	1 day	?	January
3	M.	42	Recurrent sarcoma of femur	Leopold	49 days	Amputation of hip	April
4	F.	3 mos.	Nævus of nose	Victoria	25 days	Excision of nævus	February
5	M.	23	Tuberculous glands of neck	Albert	5 days	Scraping of sinus	December
6	F.	36	Tuberculous glands of neck and axilla	Beatrice	15 days	Excision of glands	September
7	F.	22	Tuberculous glands of neck	Beatrice	14 days	Excision of glands	September
8	F.	6 mos.	Acute infective periostitis of femur	Victoria	5 days	Incision of abscess	December
9	F.	21	Tuberculous hip; sinus of knee	Beatrice	347 days	Sinus of knee	November
10	M.	37	Suppurating olecranon bursa	William	16 days	Incision of bursa	February
11	M.	9 mos.	Retro-pharyngeal abscess	Victoria	6 days	Incision of abscess	January
12	F.	46	Lupus of face	Beatrice	14 days	Scraping of lupus	January
13	F.	14	Syphilitic ulceration of nose	Beatrice	7 days	Ulcer of nose	February
14	F.	4	Lupus of vulva	Elizabeth	1 day	Lupus of vulva	October
15	M.	6 mos.	Acute abscess of thigh	Victoria	3 days	Incision of abscess	December
16	F.	13	Ectropion	Beatrice	41 days	Plastic operation	March
17	M.	5	Scald of chest, legs, and arms	Victoria	4 days	Ulcer of chest	January

(arising in hospital).

Part where eruption appeared.	Interval between action of probable cause and appearance of eruption.	Duration of attack.	Result.	Remarks.
Wound	15 days	5 days	C.	Erysipelas spread to shoulder.
Face	?	?	N.	Erysipelas quite cured.
Stump	35 days	12 days	C.	Spread to back.
Scalp	11 days	10 days	D.	Death from erysipelas.
Face	1 day	4 days	C.	Erysipelas did not start from wound.
Breast	10 days	12 days	C.	High fever. Treated by antistreptococcus serum.
Wound on neck	10 days	13 days	R.	Erysipelas cured. Cases No. 6 and 7 operated upon same day.
Wound of thigh	5 days	6 days	D.	Septicæmia. <i>Vide</i> Special Table III.
Leg	2 years	5 days	R.	Erysipelas quite cured.
From incision	16 days	8 days	D.	Erysipelas cured. Death from exhaustion. Gangrene of toes appeared before death.
Scalp	6 days	8 days	C.	
Cheek from raw surface	4 days	14 days	R.	Erysipelas cured.
Nose from ulcer	7 days	10 days	R.	Erysipelas cured.
Vulva	?	19 days	R.	Spread to abdomen, thighs, and legs.
Thigh	3 days	10 days	C.	Spread to ankle.
Face from wound	13 days	3 days	R.	No further extension. Erysipelas cured.
Chest from scald	4 days	5 days	C.	Erysipelas also appeared on leg.

SPECIAL TABLE III.—PYÆMIA, &c.

CLASS I.—*Admitted with the disease.*

Puerperal pyæmia.—I. H. H—, female, æt. 25, married. Normal confinement 2 months previously; 3 days later rigor, followed by swelling of knee and leg on 6th day. Pain and swelling increased, and abscess broke 3 weeks after onset of symptoms. Admitted on 58th day with knee flexed to angle of 150° ; arthritis of knee; movements limited and extremely painful. Sinus in popliteal space, which could not be made to enter knee-joint. Œdema and swelling of whole limb. Bedsores over trochanter and sacrum. Irregular fever, temperature rising to 102° at night. Treated with antistreptococcus serum, 10 c.c., on 11th and 4 following days. Temperature less and general condition improved. Knee treated on splint and antiseptics to sinus. Sinus and bedsores healed slowly. Tibia partially dislocated backwards. Adhesions broken down under anæsthetic. Discharged on 167th day with slight movement in knee.

2. E. S—, female, æt. 39. Confinement, followed by post-partum hæmorrhage 12 days before admission. Recurrence of hæmorrhage on 9th day. 10th day, acute abdominal pain. Admitted on 12th day; adherent placenta on posterior uterine wall; slight non-offensive vaginal discharge; uterus curetted. 15th day, temperature rose to 104° ; diarrhœa controlled by opium. 19th day, cellulitis of right broad ligament; temperature became of pyæmic character, oscillating between 97° and 104° ; slight rigors at intervals. Swelling of left temporo-maxillary joint on 24th day, followed by swelling of left elbow-joint. Treated by 10 c.c. of antistreptococcus serum daily. Improvement after two injections, which was not maintained. Gradually increasing weakness. Swelling in left buttock and right elbow. Death on 26th day after admission. No P.M.

3. A. S. E—, female, æt. 28. Normal confinement 5 weeks before admission. Fever since then. Admitted in feeble condition. Temperature varying between 104° and 107° at night. Uterus explored; nothing found. Crepitations at base of each lung. Rigors. Treated by antistreptococcus serum without improvement. Death on 12th day. No P.M.

H. M. B—, male, æt. 11. Admitted semi-comatose, with fever and low muttering delirium and rapid respiration. Swelling and redness of right side of face, with cervical glandular enlargement. Death in few hours. P.M.—Small focus of pus just below lower margin of right orbit. Periosteum intact. No skin lesion. Multiple small abscesses in lungs.

H. C—, male, æt. 24, compositor. Five weeks before admission, pile ligatured. Fourteen days later, cellulitis starting from anus and spreading to buttock. On

admission, cellulitis from anus over right buttock and halfway down thigh. Incision. No pus found. No relief of symptoms. Temperature varying between 100° and 104° . No rigors. Gradual exhaustion. Death on 10th day. P.M.—Eight ounces of clear fluid in pericardium. Subpericardial petechiæ. Small abscesses in right upper lobe abutting upon pleura. Chronic tubal nephritis.

SEPTICÆMIA—*admitted as such*.

Puerperal.—A. K—, female, æt. 18. Confinement 11 days before admission; forceps delivery. Eight days later lochia became offensive. Shivering. Increase of symptoms until admission. Rigor with temperature rising to 105° on day of admission. Uterus curetted; retained septic portions of placenta removed. Improvement until 3rd day, when rigor with temperature of 107° . Ten c.c. of antistreptococcin injected. Improvement in condition. 6th day, rigor repeated; antistreptococcin given. From this date progress rapid to recovery. Discharged cured on 15th day.

S. C—, female, æt. 30. Confinement 8 weeks before admission. Offensive vaginal discharge on 9th day. Hæmorrhage 4 weeks later. In bed for few days. Admitted to gynæcological ward. Uterus curetted and retained placenta removed. Rigors after operation; treated by uterine douches and antistreptococcus serum. Rigors regularly every day. Transferred to Surgical side on 11th day. Rigors continued until 9th day (on Surgical side), then ceased, and rapid progress to recovery. Discharged cured on 26th day.

F. L—, female, æt. 29. Confinement 45 days before admission; forceps delivery. Ruptured perinæum. Shivering and fever on 16th day. Admitted semi-comatose, with temperature of 104° . No vaginal discharge. Antistreptococcin injected; temperature fell 3° , followed by steady rise. Diarrhœa. Death on 2nd day. P.M.—Pelvic cellulitis in left broad ligament. Mucous membrane of uterus discoloured and sloughy. Mitral regurgitation.

C. D—, female, æt. 32. Confined 15 days before admission; few days later sickness and fever, which decreased. Five days before admission fever and general malaise. Admitted in feeble condition and partially comatose. Temp. 104° . Portions of retained placenta removed. Treated by antistreptococcus serum without benefit. Death on 9th day. P.M.—Uterus enlarged; contained brownish thick fluid. Cavity lined by shaggy membrane, which could be removed, leaving mucous membrane behind.

CLASS II.—*Acute bone cases*.

Acute necrosis of femur; arthritis of knee.—Kick on knee 4 days before admission. Swelling and pain noticed on inner side of knee. Incisions; small quantity of pus from beneath periosteum of popliteal surface of femur. Temperature rose to 105.6° . Knee-joint explored; no pus found in joint; had extended forwards and also upwards outside joint. 5th day, gradual decline of fever for last 3 days; pus escaped from knee-joint; cough; broncho-pneumonia. 6th day, pus burrowing up thigh; further incisions; temperature only slightly raised; child much weaker; diarrhœa; bed sore developed; gradual failure of

strength. Death on 11th day. P.M.—Knee-joint full of pus; cartilages intact. Posterior aspect of outer condyle rough and bare. Veins of limb normal. Left lower lobe solid, with abscess formation in one area; produced by close-set broncho-pneumonia. Right lower lobe similar appearance, but less extensive. Breaking down infarct. Pathologist reports: pyæmic abscess communicated with air-passage and set up broncho-pneumonia.

Acute necrosis of femur.—A. M. G—, female, æt. 6 months. Swelling of thigh 1 week. Admitted with large abscess surrounding lower end of femur. Incisions. No bare bone found. Erysipelas developed on 5th day (*vide* Special Table II). Child became rapidly weaker, and died on 10th day. P.M.—Periosteum thick and pulpy over great part of bone; strips readily; no pus beneath it. Other organs healthy.

Acute necrosis of tibia.—C. C—, male, æt. 16. Hit knee with hammer 5 days before admission. Swelling and redness supervened 2 days later. Fever. Delirium at night. Admitted with muttering delirium and cyanosed appearance. Abscess on inner surface of upper end of left tibia. Temp. 103·2°. Incisions; pus escaped. Tibia bare. Death in few hours. P.M.—Periosteum stripped from upper part of left tibia. Plastic pericarditis. Endocardium discoloured. Plastic pleurisy at both bases.

Acute epiphysitis of humerus.—C. W—, male, æt. 13 days. Swelling and redness of left shoulder noted 5 days after birth. Admitted with swelling around left shoulder; deep fluctuation. Incisions. Pus coming apparently from epiphysis. Death on following day.

CLASS III.—*Arising in hospital.*

Reducible femoral hernia.—M. G—, female, æt. 70, needle-woman. Hernia 7 years; painful. Patient fears strangulation. Omentum ligatured and ablated. Sac ligatured with silk. Wound healed by first intention. Sudden rise of temperature to 105° on 19th day after operation. Vomited. Complained of pain in back and limbs. Some cough. Pain thought to be rheumatic. Temperature remained high, and patient became feebler. Respiratory difficulty increased before death on 19th day after operation. P.M.—Pus in left ankle. Thin purulent fluid in pleuræ in small amount. No infarcts.

Stricture; extravasation of urine.—A. T—, male, æt. 39, labourer. Stricture for 4 years. Extravasation of urine 2 days, scrotum and penis being swollen. Incisions. Progress satisfactory. Sounds passed on 11th day. Following day gradual rise of temperature to 102·8°. Irregular fever until 21st day, when patient had a rigor. Temperature varied, usually reaching 104° at night. Abscess of back appeared on 27th day; incised. Temperature lower for 2 days. Ten c.c. of antistreptococcus serum injected on 30th day, and repeated every day until death. Rigors on 31st and 32nd days. Swellings appeared on left wrist and ankles on 38th day. Patient weaker. Ether given and swellings incised. Little pus found at wrist; clear fluid in ankles. Became suddenly worse, and died on the operating table. P.M.—No further abscesses found. Tubal nephritis. Healed apical tuberculosis.

Periurethral abscess.—F. C—, male, æt. 30, brewer's labourer. Gonorrhœa contracted 3 weeks before admission. Gradual swelling of perinæum and scrotum beginning 12 days later. Admitted with periurethral abscess and œdema of scrotum. Incised. Noisy delirium at night. Temperature rose on 5th day, and further incision made and pus evacuated. Temperature averaged 102°—103°, and patient became semi-comatose. Passing fæces unconsciously. Gradual weakness. Death on 12th day. P.M.—Prostate replaced by pus; periprostatic tissue infiltrated with pus, which can be made to exude from the open mouths of the veins. Iliac veins normal. Cystitis. Ureters dilated. Kidneys maroon colour, large and soft; capsules slightly adherent. Liver fatty. Breaking down infarct in spleen.

Compound subastragaloid dislocation.—J. O—, male, æt. 62, carpenter. Fall of 14 feet. Right foot dislocated inwards; outer border of foot pointing downwards. Wound over external malleolus communicating with ankle-joint. Reduction easy under anæsthetic. Plaster-of-Paris splint. Wound suppurated. Incisions. Boracic bath. Septic temperature. Amputation at seat of election on 14th day. Temperature raised after operation. Suppuration, with gradual increase in intensity of fever until 34th day, when rigor occurred. Thigh swollen, and tenderness along femoral vessels. Ten c.c. of antistreptococcus serum injected. No change in condition produced. Persistent high temperature. Gradually increasing feebleness. Death on 41st day. P.M.—Flaps firmly united. Right femoral and external iliac veins filled with reddish-grey fluid, consisting of softening clot and inflammatory products. No secondary deposits. Lungs œdematous, and lower lobes nearly solid from collapse.

Otitis media suppurativa; mastoid abscess; septic thrombosis of lateral sinus.—R. T. H—, male, æt. 7. Discharge from right ear for 3 years, which ceased a fortnight before admission; one week later followed by earache and appearance of swelling behind ear. Fever. No vomiting. Admitted with temperature of 103·6°, looking ill. Mastoid abscess. Stacke's operation. Pus evacuated from antrum. Temperature rose to 105° after operation. Restlessness. 2nd day, no optic neuritis; rigor; jugular ligatured in neck; contained fluid blood; lateral sinus explored, bled profusely; no relief of symptoms; temperature oscillating between 99° and 105°; increased weakness; very restless and crying out. 8th day, exploration of brain through trephine hole previously made without anæsthetic; no pus found. 10th day, rigor, repeated on 12th day; signs of consolidation of lung. Death on 13th day. P.M.—Necrosis of petrous bone, the overlying dura slightly discoloured. Lateral sinus filled with soft puriform clot, which had extended down the jugular to the ligature. Abscess in anterior part of right lower lobe.

Otitis media suppurativa; subdural and temporo-sphenoidal abscess; septic thrombosis of lateral sinus.—B. G—, female, æt. 14. Discharge from ear for some months. Pain with swelling and tenderness over left mastoid for 5 days. On admission, mastoid abscess. Temp. 99°. Antrum opened, contained pus. Temperature rose after operation to 102°, but fell to normal by 5th day. Drained well. Complained of pain on 7th day, and temperature rose to 102·6°. Pocket of pus opened. 9th day, cough; fever is higher, with larger oscillations (99°—103·4°); no further alteration in condition. 14th day, mastoid explored again;

bone found infiltrated with pus, but no definite collection; discharge had become very foul. Patient became gradually feebler; restless and delirious at night. On 18th day crepitations and friction were heard at both bases of lungs. The parents refused further operation. Cough became worse, with rapid respiration. Optic neuritis noted on both sides. Child died suddenly after an attack of hæmoptysis on 22nd day. P.M.—Groove for lateral sinus full of pus, which extends upwards outside the dura for some distance. Over posterior part of temporo-sphenoidal lobe dura converted into soft mass of granulation tissue without any actual perforation. Anterior half of lateral sinus filled with breaking down clot. Jugular vein and other sinuses healthy. Softened area, the size of a halfpenny, in posterior part of left temporo-sphenoidal lobe, corresponding to the hindermost quarter of the two lower convolutions. Recent abscess size of a hazel-nut lying beneath the softened area; wall of cavity scarcely differentiated. Both pleuræ adherent. Breaking down infarcts in lower lobe of each lung. One as large as chestnut at base of left lung contained pus and blood, and had a large vessel exposed in wall. Bronchi of this lung also contained blood, so this cavity probable source of hæmoptysis.

TETANUS.

Compound dislocation of ankle.—W. C—, male, æt. 50, engine driver. Framework of a crane fell on foot. Admitted with compound dislocation of ankle, with fracture of internal malleolus of tibia. Wound cleansed and dislocation reduced. Plaster-of-Paris splint. Stiffness of neck complained of on 6th day. Wound dressed; some suppuration. Wound thoroughly scraped, and pure carbolic acid applied, and also to small abrasion on left leg. Temperature rose to 103°. Typical risus sardonicus appeared. Spasms of face, abdomen, and respiratory muscles. Treated by chloral and bromide. Spasms induced by attempt at swallowing. Death on 11th day. P.M.—Ankle-joint full of grumous pus. Liver fatty. Heart dilated.

SPECIAL TABLE IV.—*Fractures and Dislocations treated*

BONE.	Sex.		Age.										Not stated.
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60			
DISLOCATIONS.													
<i>Inferior maxilla—</i>													
Bilateral	3	2	...	...	1	2	1	1	...	...	...	...	...
<i>Clavicle—</i>													
Acromial end	5	1	...	...	1	2	1	...	2	...	...	...	...
<i>Humerus—</i>													
Subcoracoid	32	11	...	...	1	3	6	13	12	6	2		
Subglenoid	5	11	...	...	2	3	2	1	1	6	1		
Subspinous	1	...	...	...	1	...	...	...	...	...	...
Not stated	2	...	...	...	1	...	...	...	...	1	...		
<i>Radius and ulna</i>	22	6	1	2	19	1	1	3	...	1	...		
<i>Radius</i>	2	3	3	1	...	...	1	...	...	...	...
<i>Ulna</i>	1	2	...	2	...	1	...	...	...	...	...
<i>Digits of hand—</i>													
Proximal phalanx	8	2	...	2	...	4	3	1	...	...	...
Middle phalanx	2	3	...	...	...	1	3	1	...	...	...
Distal phalanx	7	1	...	...	2	2	2	1	1	...	...
<i>Metacarpus</i>	3	...	...	...	1	...	1	...	...	1	...		
<i>Patella</i>	1	...	...	...	...	...	...	...	...	1	...		
<i>Toes—</i>													
Proximal phalanx	1	...	...	...	1	...	...	...	...	...	...
FRACTURES.													
<i>Nasal bones</i>	12	5	1	1	2	5	5	1	1	1	...		
<i>Inferior maxilla</i>	12	4	2	...	1	2	6	4	...	...	1		
<i>Scapula</i>	5	...	...	1	1	2	...	...	1	...	...
<i>Clavicle</i>	82	50	38	20	20	18	10	8	3	8	7		
Separation of epiphysis . . . . .	...	1	...	1	...	...	...	...	...	...	...

in Casualty Department, not admitted to Wards.

Side of body.			Remarks.
R.	L.	Not stated.	
...	...	...	Fracture of floor of meatus 1. Direct violence 1.
2	4	...	Upwards 4. Not stated 2. Direct violence 2.
19	23	1	Direct violence 5; indirect violence 5. Anæsthetic 7. Amputation of arm previously in 1.
10	6	...	Direct violence 1. Anæsthetic 1. Fractured clavicle 1.
...	1	...	Easily reduced.
2	...	...
5	22	1	Indirect violence 4. Backwards 14; backwards and outwards 6; outwards 1. Ulna backwards and radius forwards 2. Fracture of internal condyle 2; of coracoid process 1; at wrist 1. Anæsthetic 3.
2	3	...	Upper end 5. Separation of lower epiphysis 1.
2	1	...	Anæsthetic 1. Internal condyle fractured 1. Ulna forwards and outwards 1.
2	8	...	Thumb 6; index 2; middle 1. Backwards 3. Compound 2. Direct violence 1.
1	4	...	Little finger 2; ring 1; middle 1. Backwards 3. Direct violence 2.
4	3	1	Thumb 5; middle 2. Backwards 3. Direct violence 3.
3	...	...	Thumb 2. Backwards 1.
1	...	...
1	...	...
1	11	5	Compound 5.
6	3	7	Symphysis 3; at angle 1; by last molar 2; between incisors 1. Multiple 1. Direct violence 4.
4	1	...	Blade 2; acromial process 1 Direct violence 3.
69	63	...	Outer third 30; middle third 24; inner third 9; acromial end 5; interligamentous 8; greenstick 19. Comminuted 2. Direct violence 6.
1	...	...

SPECIAL TABLE IV.—*Fractures and Dislocations treated in*

BONE.	Sex.		Age.									Not stated.
	M.	F.	-5	-10	-20	-30	-40	-50	-60	+60		
FRACTURES— <i>continued.</i>												
<i>Humerus</i> —												
Shaft	29	21	12	14	4	1	4	2	3	9	1	
Anatomical neck	1	2	...	1	...	...	...	2	...	...	...
Lower extremity	18	3	1	9	11	...	...	...	...	...	...
Separation of epiphysis	4	4	2	3	3	...	...	..	...	...	...
<i>Radius and ulna</i>	71	18	19	41	21	...	2	3	...	...	2	
<i>Radius</i> —												
Shaft	34	10	9	5	9	6	7	1	3	3	1	
Colles's	33	47	...	...	12	7	8	8	22	20	3	
Separation of epiphysis	10	4	3	5	6	...	...	...	...	...	...
<i>Ulna</i> —												
Shaft	16	6	3	7	4	1	2	1	1	3	...	
Olecranon	7	2	3	...	1	1	2	2	...	...	...
<i>Metacarpus</i>	19	3	1	...	4	6	5	3	2	1	...	
<i>Phalanges</i>	38	6	2	1	11	12	7	7	3	...	1	
<i>Femur</i> . . . . .	...	2	2	...	...	...	...	...	...	...	...
<i>Tibia and fibula</i>	16	10	3	6	2	2	4	4	2	...	3	
<i>Tibia</i>	20	3	2	11	6	...	1	2	1	...	...
<i>Fibula</i>	29	13	...	2	2	5	12	11	2	4	4	
<i>Metatarsus</i>	2	2	...	...	1	...	1	...	1	1	...	
<i>Phalanges</i>	15	...	...	...	4	5	2	...	2	1	1	

Casualty Department, not admitted to Wards—continued.

Side of body.			Remarks.
R.	L.	Not stated.	
22	26	2	Upper third 8; middle third 8; lower third 15. Surgical neck 8. Direct violence 11; indirect violence 3. Comminuted 1; compound 1; into elbow-joint 3.
1	2	...	Direct violence 2.
13	8	...	Internal condyle 18; external condyle 3; dislocation of elbow 1.
3	5	...	Lower 5; upper 3.
45	42	2	Upper third 6; middle third 21; lower third 12. Greenstick 44. Indirect violence 7; direct violence 9. Fracture 5 weeks previously 1.
22	22	...	Upper third 5; middle third 5; lower third 16. Greenstick 5.
38	46	...	Double in 2.
9	4	1	Upper 5; lower 7.
13	9	...	Upper third 7; middle third 3; lower third 5. Greenstick 2.
6	3	...	
13	9	...	Thumb 1; index 5; middle 5; ring 5; little 5; multiple 4.
19	24	1	Thumb 3; index 11; middle 8; ring 7; little 14. Proximal 15; middle 10; distal 18. Compound 15.
1	1	...	Middle third 1. Greenstick 1.
7	18	1	Middle third 4; lower third 3. Pott's 6. Greenstick 2.
8	15	...	Upper third 1; middle third 4; lower third 10. Internal malleolus 1. Greenstick 1.
21	21	...	Upper third 2; middle third 1; lower third 22. Pott's 7.
2	2	...	Great toe 2; 2nd toe 1; 3rd 1.
7	8	...	Great toe 8; 2nd toe 3; 3rd toe 1; 5th 1. Proximal 8; middle 3; distal 6.

REPORT OF

THE OBSTETRICAL DEPARTMENT

FOR 1897.

By WALTER W. H. TATE, M.D.LOND., M.R.C.P.,
ASSISTANT OBSTETRIC PHYSICIAN TO THE HOSPITAL.

THE JUNIOR OBSTETRIC HOUSE PHYSICIANS FOR THE YEAR WERE MESSRS
A. L. HOME, J. B. TOMBLESON, J. P. SCATCHARD, G. D. HINDLEY, AND
S. D. TURNER.

FROM the 1st of January, 1897, to the 31st of December, 1897, 2189 women were attended in the maternity department of the hospital. The number of women attended is about 300 less than during the corresponding period of last year. Of the total number 22 resulted in twin deliveries, the remainder being single births. Thirty-two cases of abortion were attended.

The various presentations that were met with are shown in the following classification :

	Among the single births.	Among the twin births.	Total.
Vertex	1647	20	1667
Vertex with prolapsed arm . . .	5	—	5
Breech	38	13	51
Superior extremities, including the shoulder	8	—	8
Inferior extremities	8	1	9
Face and brow	6	—	6
Funis	2	—	2
Not stated (including “born be- fore arrival”)	421	10	431
Abortions	32	—	32
	<hr/> 2167	<hr/> 44	<hr/> 2211

Out of the 2189 women attended—

315 were 1st confinements.	61 were 10th confinements.
383 „ 2nd „	40 „ 11th „
299 „ 3rd „	24 „ 12th „
288 „ 4th „	9 „ 13th „
223 „ 5th „	4 „ 14th „
179 „ 6th „	1 was a 15th confinement.
134 „ 7th „	1 „ 17th „
130 „ 8th „	
88 „ 9th „	2179

In 10 cases the number of previous confinements was not stated.

The FORCEPS were employed to assist delivery in 23 cases. In 14 they were used on account of protracted labour; in 6 cases for contracted pelvis; in 2 cases they were applied to the after-coming head after version had been performed; and in 1 case they were applied on account of accidental hæmorrhage.

Five cases of PLACENTA PRÆVIA occurred during the year. The details are shown in the following table:

No.	Age of mother.	Confinement.	Sex of child.	Treatment.	Result to mother.	Result to child.	Position of placenta.
1111	30	4th	F.	Version	R.	S.	Not stated.
1394	41	11th	F.	Not stated	R.	S.	„
1529	30	7th	M.	Version	R.	S.	„
3010	32	7th	F.	Version	R.	S.	„
3132	38	10th	M.	Not stated	R.	S.	„

CASES OF VERSION.—Version was the operation selected for assisting delivery in 9 cases:

2 cases for contracted pelvis.

6 „ shoulder presentation (two of these were also cases of placenta prævia).

1 case for placenta prævia with prolapse of the arm.

BREECH PRESENTATIONS occurred in 51 cases, which gives a proportion of 1 in 43·35 cases. Thirteen stillbirths occurred among the cases of breech delivery, representing a mortality of 25·5 per cent.

Four maternal deaths occurred during the year. A brief report of each of these is given below.

No. 818. Mrs. H—, æt. 28. Patient was delivered of twins on the 18th January, 1897. Death was due to rapidly spreading erysipelas over buttocks and thighs, starting from a lacerated perinæum.

No. 1302. Mrs. F—, æt. 22, primipara. Patient began to have eclamptic fits at 1 p.m. on March 22nd, 1897. The fits lasted for about ten minutes at first, and recurred every half hour. At 9 p.m. she was first seen by Mr. Tombleson, the junior obstetric house physician, and she was then in a comatose state, with dilated pupils, stertorous breathing, and weak thready pulse. The convulsions were at this time almost continuous. The patient was put under the influence of chloroform, and on examination the os was found to be rather rigid, and only admitted the tip of the finger. Forcible dilatation with the finger was had recourse to, and de Ribes' bag was then introduced. In half an hour, by means of traction on the bag the cervix was sufficiently dilated to admit three fingers. The membranes were now ruptured, and after incision of the cervix the child was delivered with forceps. The placenta was expressed without difficulty. By this time the condition of the patient had greatly improved; rate of pulse 90. She became partially conscious. The uterus was well contracted, and there was no hæmorrhage of importance. After half an hour the patient's condition suddenly changed, and she became faint and pulseless. Strychnine and brandy were injected, but failed to revive her. She died of syncope.

For two months before the confinement patient's leg had been swollen, and she had had one or two fits during the three days prior to her sending up to the hospital. The child was stillborn, in a condition of white asphyxia. No urine could be obtained for examination, as the bladder was found to be empty on arrival of the obstetric clerk.

No. 1794. Mrs. D—, æt. 35. Seventh confinement. The obstetric clerk was summoned at twelve midnight on the 12th June. The membranes had ruptured two days previously, and the os easily admitted two fingers. The pains, which had begun an hour before the arrival of the clerk,

were strong and regular, occurring every five minutes. One hour and a half later the os was still more dilated and the head presenting. At 3 a.m. on the 13th the patient had two very severe pains, and pulse-rate rose to 120. She became cyanosed and vomited. The pulse rapidly became weaker, but after artificial respiration she gradually improved. After this the pains were very feeble, and occurred only at long intervals. At 3.50 a.m. the patient was seen by Mr. Scatchard, the junior obstetric house physician, and at this time the pulse was moderately good. On vaginal examination the presenting part was found to be the brow, and a hand was also presenting. Internal version was performed, the feet being found just above the head, showing that the child's body must have been much doubled upon itself. There was difficulty in delivering the after-coming head, which necessitated the use of forceps. During the delivery the mother's condition became very bad, respiration was sighing, and the pulse imperceptible. In spite of injections of strychnine and brandy she died within a few minutes after the birth of the child. On vaginal examination a large rent was found in the posterior vaginal wall, passing up into the peritoneal cavity, which contained a large amount of blood. There was no evidence of any contraction of the pelvis.

No. 2023. Mrs. D—, æt. 26, primipara. Patient was confined on 28th June, 1897, labour being in all respects normal. On the following day she complained of headache and shiverings, and the temperature was 104.8° . The next day patient felt better, temperature being 103.8° in the morning and 101.8° in the evening. The lochia were slightly offensive, and a thin grey membrane was seen on the surface of a slight perinæal tear which occurred during delivery. The abdomen was tender but not distended. On July 1st the patient was weaker and diarrhœa began. In the evening the uterus was explored under an anæsthetic with negative result. The temperature at this time was 98° . The patch of membrane on the perinæal tear had now spread up the posterior vaginal wall, which had a sloughy appearance; a good deal of purulent offensive discharge was present. On July 2nd the tongue was dry and brown, patient was delirious at times, and the diarrhœa continued. Patient

got gradually weaker and died. The cause of death was septicæmia. Treatment consisted in five-grain doses of quinine during the first two days, and then injections of anti-streptococcus serum.

CHILDREN BORN.—During the year 2211 children were born, including 22 cases of twin births. The number of stillbirths amongst these was 87, which represents a percentage of 3·94, or one stillbirth in every 25·4 labours.

The circumstances under which these stillbirths occurred are shown in the following list :

Natural labours	46
Twin births	4
Premature births	5
Placenta prævia	7
Breech presentations	13
Shoulder presentations	3
Prolapsed foot or arm	4
Face presentations	1
Footling presentations	2
Contracted pelvis	1
Eclampsia	1
	<hr/> 87

The following table gives particulars of the 22 cases of twin births :

No. in Maternity Book.	Age of mother.	No. of confinement.	Date of birth.	Sex.		Presentation.	
				1st child.	2nd child.	1st child.	2nd child.
1896							
812	29	7th	Jan. 10	M.	M.	Vertex	Breech.
818	28	4th	Jan. 18	M.	M.	„	„
969	33	10th	Feb. 6	M.	M.	?	„
1075	35	5th	Jan. 7	M.	F.	Breech	Vertex.
1202	34	8th	Mar. 7	M.	M.	Vertex	„
1277	38	10th	May 13	M.	F.	Breech	Breech.
1331	32	7th	Mar. 9	M.	F.	Vertex	Vertex.
1546	22	4th	Mar. 14	M.	F.	„	Breech.
1569	27	3rd	July 2	M.	M.	?	?
1641	40	6th	July 14	M.	F.	Breech	Vertex.
1642	40	9th	June 22	M.	M.	„	„
1901	38	4th	June 23	M.	M.	Vertex	Breech.
2138	36	?	June 9	F.	F.	„	?
2313	33	7th	Sept. 24	M.	M.	„	Footling.

No. in Maternity Book.	Age of mother.	No. of confinement.	Date of birth.	Sex.		Presentation.	
				1st child.	2nd child.	1st child.	2nd child.
1896							
—							
2473	34	4th	Sept. 27	M.	F.	Vertex	Vertex.
2597	32	8th	Oct. 29	F.	M.	?	?
2718	33	9th	Dec. 13	M.	F.	Breech	Breech.
2793	32	5th	Nov. 26	M.	F.	Vertex	„
2947	35	6th	Nov. 6	F.	F.	?	?
2955	36	4th	Nov. 11	M.	M.	Vertex	Vertex.
3428	33	5th	Dec. 30	M.	F.	?	?
1897							
—							
27	23	1st	Dec. 21	F.	F.	Vertex	Vertex.

REPORT

OF THE

IN-PATIENT DEPARTMENT FOR DISEASES OF WOMEN

FOR THE YEAR 1897.

By ARTHUR F. STABB, M.B., B C.CANTAB., M.R.C.P.

IN the following report I have kept to the arrangement carried out in former years by Dr. Tate. The first part consists of four tables, viz.: (1) general statement of patients in Adelaide Ward, with results of treatment; (2) general classification of diseases for which patients were admitted; (3) a list of abdominal sections and other major operations performed in the year; and (4) the causes of death in the cases ending fatally. The second part consists of a short general statement of laparotomies performed, followed by three Special Tables, each table being succeeded by abstracts of two selected cases of interest. The first Special Table refers to laparotomies performed for diseases of ovaries and broad ligament cysts; the second, laparotomies performed for diseases of the Fallopian tubes, including tubal gestation; and the third, laparotomies for diseases other than those included in the first two tables.

TABLE I.

General Statement of Patients in Adelaide Ward.

Number of Beds in Ward (including small Ward)	...	...	...	21
Number of Patients in Ward, Jan. 1st, 1897	...	...	...	11
" " " Dec. 31st, 1897	...	...	...	17
			Rate per cent.	
Cured	...	...	...	171
Relieved	...	...	...	51
Unrelieved or for other causes	...	...	...	27
Died	...	...	...	12
Total				261
				100·00

Average number of days of each patient's stay in hospital—23·96.

TABLE II.—General

DISEASE.	Number of cases.	Age.						Duration of residence.				Result.				
		10-20	20-30	30-40	40-50	50-60	Above 60	Under 1 wk.	1-2 weeks	2-4 weeks	1-2 months	Above 2 mos.	Cured.	Relieved.	Unrelieved.	Died.
I. DISEASES OF OVARY.																
A. Fibroma	1	...	1	...	...	...	...	...	...	...	1	...	1	...	...	...
B. <i>Cysts</i> :																
<i>a.</i> Simple and multiple	19	...	4	7	5	2	1	2	2	2	12	1	14	1	3	1
<i>b.</i> Suppurating	3	...	2	...	1	...	...	1	...	1	1	...	1	...	...	2
<i>c.</i> Papillomatous	1	...	...	1	...	...	...	...	...	...	1	...	1	...	...	...
<i>d.</i> Dermoid	1	1	...	...	...	...	...	...	...	...	1	...	1	...	...	...
<i>e.</i> Cystic fibroma	1	...	1	...	...	...	...	...	...	...	1	...	1	...	...	...
<i>f.</i> Peri-oöphoritis	1	...	...	1	...	...	...	1	...	...	...	...	1	...	...	...
II. DISEASES OF FALLOPIAN TUBES.																
A. Salpingitis :																
<i>a.</i> Simple	21	...	8	10	3	...	...	1	2	9	9	...	10	9	1	1
<i>b.</i> Purulent	9	...	6	2	1	...	...	1	2	4	2	7	...	...	...	2
B. Pyosalpinx	6	1	2	2	1	...	...	1	...	1	4	...	5	...	...	1
C. Hydrosalpinx	1	...	...	1	...	...	...	...	...	...	1	...	1	...	...	...
III. DISEASES OF PELVIC PERITONEUM, &c.																
A. Perimetritis	1	1	...	...	...	...	...	...	...	1	...	...	1	...	...	...
B. Pelvic cellulitis	4	1	2	1	...	...	...	...	2	2	...	4	...	...	...	...
C. Remote parametritic abscess	2	...	2	...	...	...	...	...	2	...	...	2	...	...	...	...
D. Cyst of broad ligament	5	...	2	2	1	...	...	...	2	3	...	5	...	...	...	...
IV. DISEASES OF UTERUS AND CERVIX.																
A. Adenoid vegetations of endometrium	28	1	8	14	3	2	...	7	18	3	...	27	1	...	...	...

Table of Diseases.

REMARKS.

This occurred in a young unmarried woman æt. 21, and weighed 5 lbs. 6 oz. The case is reported fully in "Abstract."

In 15 cases the tumour was removed by abdominal section, 14 of which were cured; 1 died from shock 3 hours after operation, but this was a case of a ruptured gangrenous cyst with twisted pedicle and general peritonitis. In the 4 cases where no operation was performed operative treatment was declined.

2 of these cases were unfortunately fatal, 1 from shock 24 hours after operation, the other from peritonitis 3 days after operation.

Treated by laparotomy. Patient made a good recovery.

Both ovaries were the seat of dermoid cysts; one of them had a twisted pedicle. Patient made an excellent recovery.

This was a small tumour, and occurred in the opposite ovary to one affected with a cystic adenoma.

Treated by rest.

11 out of the 21 were treated by laparotomy, and all recovered except 1 which was fatal 4 days after operation, apparently from exhaustion, as no signs of peritonitis were found post mortem. Of the remaining 10 cases, in 2 operation was declined, the other 8 were mild cases treated by rest, douches, &c.

The 2 cases that proved fatal were both cases of purulent salpingitis complicated by ovarian abscess; in one the rectum subsequently gave way at site of adhesions that had been separated, in the other a fistulous communication with bowel from the ovarian abscess that was closed during the operation subsequently leaked, peritonitis being the cause of death in each case.

All recovered except one, and this was a case of burst pelvic abscess originating in a pyosalpinx, patient only surviving the operation half an hour.

This occurred in a patient whose opposite tube was the seat of a pyosalpinx.

Treated by rest.

2 were treated by rest, douches, &c., the other 2 went on to suppuration and were incised and drained; 3 followed labour and 1 laceration of the cervix.

Both puerperal, and both treated by incision and drainage.

Laparotomy was performed in all 5; in 3 the cysts could not be enucleated as they had burrowed so deeply, and so after evacuation were allowed to drop back into pelvis.

One of the 2 cases enucleated was suppurating; all did well.

Dilatation and curetting was done in all the 28 cases; in 1 case the curette perforated the body of the uterus, and malignant disease was feared, but patient went out apparently cured. One patient had recurrence three times within a few months, and finally vaginal hysterectomy was performed.

TABLE II—

DISEASE.	Number of cases.	Age.					Duration of residence.					Result.				
		10-20	-30	-40	-50	-60	Above 60	Under 1 wk.	1-2 weeks	2-4 weeks	1-2 months	Above 2 mos.	Cured.	Relieved.	Unrelieved.	Died.
IV. DISEASES OF UTERUS AND CERVIX— <i>continued.</i>																
B. Fibro-myomata :																
<i>a.</i> Of body	18	...	2	6	7	2	1	2	2	7	7	...	5	8	3	2
<i>b.</i> Of cervix	1	...	...	1	...	...	...	...	...	1	...	...	1	...	...	...
C. Carcinoma :																
<i>a.</i> Cervix	10	...	1	2	3	1	3	1	...	4	5	...	5	2	3	...
<i>b.</i> Body	1	...	...	...	...	...	1	...	...	...	1	...	1	...	...	...
D. Fibroid polypi	5	...	1	...	4	...	...	...	2	2	1	...	5	...	...	...
E. Prolapse of uterus	5	...	1	1	3	...	...	...	...	...	4	1	5	...	...	...
F. Retroversion of uterus	7	...	5	1	1	...	...	...	3	3	1	...	5	2	...	...
G. Antelexion of uterus	1	...	...	1	...	...	...	...	...	1	...	...	1	...	...	...
H. Laceration of cervix	3	...	2	1	...	...	...	...	2	...	1	...	1	2	...	...
V. DISEASES OF VAGINA, VULVA, &C.																
A. Chronic purulent vaginitis	1	...	...	...	1	...	...	...	1	...	...	...	1	...	...	...
B. Vesico-vaginal fistula	2	...	2	...	...	...	...	...	...	...	...	2	...	2	...	...
C. Recto-vaginal fistula	1	...	...	1	...	...	...	...	...	...	1	...	1	...	...	...
D. Vaginismus	1	...	...	1	...	...	...	...	1	...	...	...	1	...	...	...
E. Stenosis of vaginal orifice	1	1	...	...	...	...	...	...	...	1	...	...	1	...	...	...
F. Cystocele	1	...	...	...	...	1	...	...	...	...	1	...	1	...	...	...
G. Cyst of Gärtner's duct	1	...	1	...	...	...	...	...	...	1	...	...	1	...	...	...
H. Cyst of Bartholin's duct	1	...	1	...	...	...	...	...	...	1	...	...	1	...	...	...
I. Urethral caruncle	5	1	1	...	2	...	1	1	2	1	1	...	5	...	...	...
J. Ruptured perinæum	18	...	9	6	3	...	...	1	2	3	11	1	15	...	3	...
VI. PREGNANCY AND ITS COMPLICATIONS.																
A. Pregnancy	1	...	1	...	...	...	...	1	...	...	...	...	...	...	1	...
B. Hæmorrhage during pregnancy	3	...	2	1	...	...	...	...	1	2	...	...	3	...	...	...
C. Vomiting during pregnancy	2	...	2	...	...	...	...	1	1	...	...	...	...	2	...	...
D. Hydramnios	1	...	...	1	...	...	...	...	...	1	...	...	1	...	...	...
E. Albuminuria of pregnancy	1	...	...	...	1	...	...	...	...	...	1	...	1	...	...	...
F. Threatened abortion	4	...	2	2	...	...	...	...	2	2	...	...	4	...	...	...
G. Incomplete abortion	11	1	4	6	...	...	...	...	6	5	...	...	11	...	...	...
H. Hæmorrhage after abortion	1	...	1	...	...	...	...	...	1	...	...	...	1	...	...	...

continued.

REMARKS.

10 of these were operated upon, 4 by oöphorectomy, 4 by abdominal hysterectomy, 1 by enucleation (a sessile submucous fibroid), and 1 by myomectomy; in 3 operation was refused; 2 were treated by curetting, and the remaining 3 were not causing serious symptoms and so no operation was advised. The 2 deaths occurred, 1 from peritonitis after abdominal hysterectomy, the other from shock after myomectomy.
Removed by enucleation.

5 were treated by vaginal hysterectomy; 2 of these were complicated by pyometra, another had the radical operation started, but this had to be abandoned owing to infiltration of cellular tissue; the remaining 4 cases were inoperable.
Removed by vaginal hysterectomy.
All removed by scissors; 1 was sloughing, and another was accompanied by several mucous polypi.
In 4 of these amputation of supra-vaginal cervix was performed, in 1 ventro-fixation also, and in another vaginal fixation.

Emmet's operation was performed in one of these cases.

These were both severe chronic cases, and neither was completely cured; in 1 case closure of vaginal outlet was eventually performed with fairly satisfactory results.

Treated by Sims' glass vaginal dilators with satisfactory result.
Hymen was almost imperforate, and there was a slight continuous sanguineous discharge due to retained menstrual blood; hymen was incised with good result.
Treated by colporrhaphy.
A cyst of the size of a hen's egg in anterior vaginal wall; it was dissected out.
Suppuration had not occurred. Cyst was dissected out.
Treated in each case by removal with scissors, the base being afterwards thoroughly cauterised.
All but 3 treated by perineorrhaphy with excellent result. In 2 examination was refused, and 1 case was so slight that operation was not advised.

1 was cured by rest, &c.; 1 terminated in spontaneous abortion, and in the third abortion was induced.
In both cases the vomiting was relieved by rest, aperients, &c.
A case of twin pregnancy; terminated in spontaneous abortion.
Premature labour induced with excellent result; mother and child did well.
1 case cured by rest, the other 3 terminated in abortion, spontaneous or induced.
All were treated by dilatation of cervix and exploration of uterine cavity.
Cervix was dilated and uterus explored, but found empty; hæmorrhage then ceased.

TABLE II.—

DISEASE.	Number of cases.	Age.						Duration of residence.					Result.			
		10-20	-30	-40	-50	-60	Above 60	Under 1 wk.	1-2 weeks	2-4 weeks	1-2 months	Above 2 mos.	Cured.	Relieved.	Unrelieved.	Died.
VI. PREGNANCY AND ITS COMPLICATIONS— <i>continued.</i>																
I. Decidual endometritis	2	...	1	1	...	...	...	...	2	...	...	...	2	...	...	...
J. Septic thrombosis of iliac veins, &c.	1	...	1	...	...	...	...	...	...	...	1	...	1	...	...	...
K. Retained products of conception . . .	6	...	1	4	1	...	...	...	3	3	...	...	4	...	...	...
L. Obstructed labour (intra-pelvic fibroid)	1	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...
M. Tubal gestation (moles)	7	...	5	2	...	...	...	...	...	...	7	...	7	...	...	...
N. Interstitial pregnancy	1	...	...	1	...	...	...	...	...	...	1	...	1	...	...	...
VII. VARIOUS.																
A. Dysmenorrhœa	2	...	2	...	...	...	...	...	1	1	...	...	1	1	...	...
B. Menorrhagia	4	1	...	2	1	...	...	3	...	1	...	...	1	2	1	...
C. Metrorrhagia	5	...	3	1	1	...	...	4	1	...	...	...	2	1	2	...
D. Pelvic neuralgia	9	1	5	3	...	...	...	7	2	...	...	...	7	2	...	...
E. Pelvic abscess	2	...	2	...	...	...	...	...	...	...	2	...	2	...	...	...
F. Abdominal tuberculosis	3	1	1	1	...	...	...	1	...	1	1	...	3	...	...	...
G. Malignant tumours of abdomen . . .	3	...	...	1	...	1	1	...	1	...	2	...	1	...	2	...
H. Retro-peritoneal cyst	1	...	...	...	...	1	...	...	...	...	1	...	1	...	...	...
I. Abdominal tumour	4	...	1	1	1	1	...	1	2	...	1	...	1	3	...	...
J. Febricula	1	...	1	...	...	...	...	1	...	...	...	...	1	...	...	...
K. Abdominal pain; vomiting	1	...	1	...	...	...	...	1	...	...	...	...	1	...	...	...
L. Secondary glandular carcinoma in pelvis; œdema of leg	1	...	...	1	...	...	...	1	...	...	...	...	1	...	...	...
M. Papillomatous disease of peritoneum; ascites	1	...	...	1	...	...	...	1	...	...	...	...	...	...	1	...
N. Caries of ilium	1	...	1	...	...	...	...	...	1	...	...	...	...	...	1	...
O. Dyspareunia	1	...	...	1	...	...	...	...	1	...	...	...	1	...	...	...
P. Hydronephrosis	1	...	1	...	...	...	...	...	1	...	...	...	...	...	1	...
Q. Thickening of sigmoid flexure ? cause	1	...	1	...	...	...	...	...	...	...	1	...	1	...	...	...
R. Tumour of rectus abdominis	1	...	...	1	...	...	...	1	...	...	...	...	...	...	1	...

continued.

REMARKS.

- Treated by curetting.
- A most remarkable recovery; the patient was admitted 5 weeks after labour with history of septic pleurisy and pneumonia; the œdema extended above level of umbilicus.
- Two of these were very septic when admitted, and soon after exploration of uterus they developed rigors and symptoms of septicæmia; they were transferred to the isolation block, where subsequently 1 died, and the other completely recovered.
- A case of Cæsarean section; the mother unfortunately died 4 days after operation of peritonitis, the infant did well.
- 6 of these were submitted to laparotomy, and the remaining one improved so much under rest that no operation was indicated. In none of the cases operated upon was there rupture of the tube; in 5 of these a hæmatocele was present, and in these cases the fimbriated extremities of the tubes were patulous.
- A remarkable case of very early rupture of an interstitial pregnancy in a myomatous uterus, with subsequent continuance of gestation up to about 3½ months. The case was treated by abdominal hysterectomy and did very well.
- One treated by dilatation and curetting; the other by dilatation and a glass intra-uterine stem pessary.
- 1 case dilated and curetted, 2 treated by rest, douches, &c.; in the fourth examination was refused.
- 2 treated by dilatation and curetting, 1 by rest, &c., and in the other 2 the treatment offered was refused.
- Both treated by laparotomy.
- Two had exploratory laparotomy performed with temporary benefit; the third treated by rest and tonics.
- In 1 of the fatal cases death occurred 5 days after exploratory laparotomy from exhaustion; the other patient had had a pelvic abscess drained *per vaginam*, and died some weeks later from gradual exhaustion.
- Contained 9 pints of clear fluid; was enucleated with some difficulty.
- Transferred to Medical ward.
- Secondary to carcinoma of cervix; the uterus had been removed by vaginal hysterectomy (Dr. Tate) nearly 3 years previously; the œdema improved under rest in bed.
- Patient had been operated upon by Dr. Cullingworth 3 years previously for papillomatous cysts of both ovaries. Was transferred to Surgical ward.
- Transferred to Surgical ward.
- Sent in as an ovarian cyst. Was transferred to Medical ward.
- Exploratory laparotomy performed for pelvic mass which proved to be the thickened sigmoid flexure with numerous adhesions to surrounding pelvic organs.
- Transferred to Surgical ward.

TABLE III.—*Operations performed during the Year.*

Laparotomies:

Cystic adenoma of ovary	15
Papillomatous cyst of ovary	1
Dermoid cyst of ovary	1
Suppurating cyst of ovary	2
Fibroma of ovary	1
Broad ligament cyst	5
Salpingitis	20
Pyosalpinx	6
Tubal gestation	6
Cæsarean section	1
Abdominal hysterectomy	5
Exploratory laparotomy	7
Retro-peritoneal cyst	1
Pelvic abscess	2
Oöphorectomy	4
Myomectomy	1
Ventro-fixation	1
	— 79
Vaginal hysterectomy for cancer of body of uterus	1
„ „ „ of cervix of uterus	5
„ „ for recurrent adenoid vegetations	1
Amputation of cervix for hypertrophic elongation	4
Emmet's operation for laceration of cervix	1
Perineorrhaphy	17
Enucleation of submucous fibroid of body of uterus	1
„ of cervical fibroid	1
Anterior colpotomy and vaginal fixation of uterus	1
Colporrhaphy	3
For vesico-vaginal fistula	1
For recto-vaginal fistula	1
Excision of fibroid polypus	5
„ of vaginal cyst	1
„ of cyst of Bartholin's duct	1
Kolpocleisis	1
	— 45
Total	(79 + 45) = 124

TABLE IV.—*Causes of Death in Fatal Cases.*

Shock and collapse after laparotomy for (1) gangrenous ruptured ovarian cyst with twisted pedicle; (2) ruptured pelvic abscess secondary to pyosalpinx; (3) suppurating ovarian cyst; (4) large subperitoneal fibroid burrowing between the layers of right broad ligament	4
Exhaustion following (1) laparotomy for double salpingitis with inflamed ovarian cysts; (2) exploratory laparotomy for ascites and abdominal cancer; (3) pelvic cancer with abscess (latter had been drained <i>per vaginam</i>)	3
Peritonitis following (1) laparotomy for chronic suppurative salpingitis with ovarian abscess (latter communicating with sigmoid flexure); (2) laparotomy for purulent salpingitis with ovarian abscess; (3) laparotomy for suppurating ovarian cyst; (4) abdominal hysterectomy for interstitial uterine fibro-myoma; (5) Cæsarean section for labour obstructed by uterine fibroids	5
Total	12

ABDOMINAL SECTION, INCLUDING OVARIOTOMY.

A large number of laparotomies have been performed during the year, viz. seventy-nine, an increase of sixteen on last year. Of these seventy-nine cases twenty-five were performed for tumours of ovary and broad ligament (see Special Table I), thirty-two were for diseases of the Fallopian tubes (see Special Table II), and the remaining twenty-two include Cæsarean section, abdominal hysterectomy, oöphorectomy, and the various exploratory laparotomies (see Special Table III). Of the twenty-five laparotomies in Special Table I, there were twenty-two recoveries and three deaths. In the first fatal case, No. 9, death occurred on the day following the operation from shock; the operation was for suppurating cyst of left ovary, and was a long and difficult one, the cyst rupturing during separation of dense adhesions and soiling the peritoneum, which was therefore flushed with boric acid solution. In the second fatal case, No. 10, death also followed a severe operation for suppurating ovarian cyst; the peritoneum was not apparently soiled

during the operation, but the patient died three days later from general suppurative peritonitis. The third fatality occurred in the case of No. 20; patient was admitted in a practically hopeless condition with signs of general peritonitis and pelvic tumour. When the abdomen was opened a gangrenous and ruptured ovarian cyst was found with twisted pedicle, also general septic peritonitis; patient nearly died on the table, but rallied temporarily under treatment by intra-venous injection of brandy and saline solution; she died three hours later.

In Special Table III are included (besides salpingitis, pyosalpinx, &c.) tubal gestation and ovarian abscess (where the latter was evidently secondary to suppurative salpingitis). The thirty-two laparotomies in this table yielded twenty-eight recoveries and four deaths; of these latter, one, No. 5, was a case of suppurative salpingitis with accompanying small ovarian abscess; the adhesions were extremely dense, especially to back and floor of pelvis; patient died seven days after operation from peritonitis, and post-mortem examination showed a small perforation in the anterior wall of rectum at the site of some of the old adhesions. The second fatal case, No. 6, occurred after operation for a similar condition (suppurative salpingitis and abscess of ovary); in this case during separation of adhesions between the ovarian abscess and sigmoid flexure it was found that there was a fistulous communication between the two; the opening in the bowel was closed by Mr. Abbott, but the patient died of peritonitis four days later, and post mortem the bowel was found to leak at situation of the old opening. The third fatal case, No. 9, was that of a patient admitted with signs of an inflamed large cystic swelling of pelvis; three days after admission she became suddenly collapsed, and it was evident that the cystic swelling had burst; the abdomen was opened at once, when 4 pints of offensive pus escaped; the patient only survived the operation half an hour, and post mortem a large abscess was found between the layers of the left broad ligament which had burst into the general peritoneal cavity, and there was a large direct communication between this abscess and the dilated and suppurating left Fallopian tube. The fourth fatal case, No. 13, was one of

double salpingitis with inflamed cystic ovaries; there were very dense firm adhesions, and the operation was a long and difficult one; the patient began to show the usual signs of peritonitis two days after operation (vomiting, abdominal pain, and distension), but after her death, which occurred two days later, no signs of peritonitis could be detected.

The twenty-two cases in Special Table III include five abdominal hysterectomies with one death; one myomectomy, fatal; four oöphorectomies for uterine fibro-myomata, all successful; one Cæsarean section for labour obstructed by fibroids, fatal; one ventro-fixation of uterus, successful; and the rest were exploratory laparotomies for various conditions, with one death.

The fatal case of abdominal hysterectomy, No. 4, was in the case of a young woman *æt.* 26, with an interstitial fibroid in the anterior uterine wall; she was suffering from excessive and dangerous hæmorrhage; death unfortunately occurred from peritonitis nine days after operation.

The death after myomectomy, No. 15, was due to loss of blood and shock, and occurred two hours after operation, which was a very difficult one, for a large subperitoneal fibroid growing between the layers of the right broad ligament. The death after Cæsarean section, No. 7, was from peritonitis four days after operation.

There are no changes to report so far as the general management of abdominal operations is concerned; the usual routine practice is to avoid both the flushing out of the general peritoneal cavity and the use of a drainage-tube, except in special cases (peritoneal flushing was used twelve times, or in 15 per cent., and drainage eight times, or 10 per cent.). The continuous catgut suture for the rectal aponeurosis continues to give most satisfactory results, and the occurrence of a ventral hernia (except where drainage has been employed) is now almost unknown.

SPECIAL TABLE I.—*Abdominal Section for*

No.	Name.	Residence.	Age.	Civil condition.	Date of operation.	Nature, &c., of tumour.	Adhesions.
1	M. H.	Chesterfield	48	W.	1896 Dec. 3	Cystic adenoma of left ovary.	None
2	M. M.	Rochester	38	W.	Dec. 17	Papillomatous cyst of right ovary; slight ascites.	Slight and recent
3	F. S.	St. Neots	60	W.	1897 Jan. 7	Cystic adenoma of right ovary.	None
4	A. W.	Battersea	18	S.	Jan. 7	Dermoid cyst of each ovary.	Slight
5	S. P.	Peckham	44	M.	Feb. 18	Cystic adenoma of left ovary.	Recent
6	E. P.	Herne Bay	29	M.	March 25	Cystic adenoma of left ovary.	None
7	J. B.	Petersfield	56	M.	April 13	Cystic adenoma of left ovary.	None
8	H. H.	Stockwell	29	M.	June 4	Cystic adenoma of left ovary; twisted pedicle; intra-cystic hæmorrhage	None
9	H. R.	Wandsworth	26	M.	June 10	Suppurating left ovarian cyst.	Recent
10	F. C.	Lavender Hill	29	M.	June 17	Suppurating right ovarian cyst.	Recent
11	F. A.	Battersea	42	M.	June 17	Cystic adenoma of right ovary; suppurating cyst of left ovary.	Many and dense
12	S. D.	Clapham	39	M.	July 15	Cystic adenoma of left ovary.	None
13	B. D.	Edmonton	22	S.	July 29	Unilocular cyst of left ovary; slight ascites.	Recent

Ovarian or Broad Ligament Tumours.

Condition and treatment of other ovary.	Drainage.	Peritoneum flushed.	Result.	Remarks.
Normal	No	No	C.	Cyst contained 12 pints of fluid. There was slight pyrexia for 10 days after operation, accompanied by signs of œdema in lungs. Convalescence subsequent to this was normal.
Normal	No	No	C.	The pedicle was found twisted in this case, and there was slight intra-cystic hæmorrhage. Patient made a good recovery.
Atrophic	No	Yes	C.	Flushing of the peritoneum was employed in this case, as it had become soiled by cystic contents. Convalescence normal, except for some thrombosis of veins of left calf.
See "Nature of tumour"	No	No	C.	The cyst on right side had twisting of pedicle and was inflamed. Convalescence normal.
Normal	No	No	C.	Slight bronchitis during convalescence, which was otherwise normal.
Normal	No	No	C.	Convalescence normal.
Atrophic	No	No	C.	Convalescence normal.
Normal	No	Yes	C.	See "Abstract."
Swollen and congested	No	Yes	D.	During operation some offensive pus from cyst escaped into peritoneum; the latter was flushed with boric acid solution. Patient never recovered from shock of operation, and died next day.
Normal	No	No	D.	Peritoneal cavity was not apparently contaminated during operation, but next day patient complained of abdominal pain, followed the day after by distension, unrelieved by long rectal tube, &c., or Mag. Sulph. Death occurred 3 days after operation, and post mortem general suppurative peritonitis was found.
See "Nature of tumour"	No	No	C.	Patient had been operated on in Adelaide Ward Dec., 1897, by Dr. Cullingworth for large pelvic abscess, which was incised and drained. For 3 weeks previous to present admission she had suffered from pyrexia with abdominal pain and vomiting. Convalescence protracted, but ultimately good. About 1 ounce of pus was passed <i>per rectum</i> on June 30th.
Small fibroma (removed)	No	No	C.	Convalescence normal.
Normal	No	No	C.	Although right ovary was normal there was a small fibro-cystic tumour of right ovarian ligament, which was removed, ovary being left. Convalescence normal.

No.	Name.	Residence.	Age.	Civil condition.	Date of operation.	Nature, &c., of tumour.	Adhesions.
14	B. N.	Paddington	30	M.	1897 Aug. 19	Cystic adenoma of left ovary.	None
15	R. S.	Barnstaple	48	M.	Aug. 19	Cystic adenoma of left ovary.	None
16	S. M.	Barnsbury	38	M.	Aug. 21	Cystic adenoma of right ovary.	Many and dense to abdominal wall, omentum, and bowel
17	A. M.	St. Albans	33	S.	Sept. 28	Cystic adenoma of right ovary.	Recent
18	P. C.	Brixton	21	S.	Oct. 26	Fibroma of left ovary; slight ascites.	A few posteriorly
19	E. J.	Lavender Hill	63	W.	Nov. 19	Cystic adenoma of left ovary.	None
20	E. W.	Battersea	36	M.	Nov. 25	Cystic adenoma of right ovary; ruptured, gangrenous, and with twisted pedicle.	Recent
21	S. M.	New Kent Road	41	M.	Feb. 4	Broad ligament cysts (left).	Many and dense
22	N. B.	Hampstead	33	M.	April 27	Suppurating cyst of left broad ligament.	A few to bowel
23	L. L.	Hastings	28	M.	May 27	Right broad ligament cyst.	None
24	E. H.	Old Kent Road	33	M.	Sept. 16	Right broad ligament cyst.	None
25	B. P.	Brixton	21	M.	Dec. 1	Left broad ligament cyst.	Numerous to pelvic wall and bowel

Condition and treatment of other ovary.	Drainage.	Peritoneum flushed.	Result.	Remarks.
Normal	No	No	C.	Convalescence normal.
Normal	No	No	C.	Five weeks after this operation patient was operated on for an old-standing ruptured perinæum. Was discharged well.
Normal	No	No	C.	Adhesions were very troublesome, but fortunately those to bowel were less firm than the rest. Patient had a slight attack of left-sided pleurisy during convalescence, which was otherwise normal.
Early cystic (removed)	No	No	C.	Convalescence normal.
Early cystic (punctured)	No	No	C.	See "Abstract."
Atrophic	No	No	C.	Convalescence normal.
Normal	Yes	Yes	D.	Patient was admitted in an almost hopeless condition, evidently suffering from general peritonitis and pelvic tumour. On opening abdomen a large quantity of dirty yellow fluid of fæcal odour escaped. A gangrenous and ruptured right ovarian cyst was found with twisted pedicle; this was removed, abdominal cavity flushed out with boric acid solution, and glass drainage-tube employed. Intra-venous injection of saline fluid and brandy given with temporary benefit, but patient sank again and died 3 hours later.
See "Remarks"	No	No	C.	One small cyst was shelled out; the larger ruptured during attempts at separation of adhesions, and was left <i>in situ</i> . Ovaries not seen. Good recovery.
Normal	Yes	Yes	C.	Cyst had burrowed deeply, and ruptured during enucleation. Peritoneum was flushed with boric acid solution, and glass drainage-tube used; latter was removed 4 days after operation. A little pus was passed <i>per rectum</i> twice during convalescence. Recovery good.
Normal	No	No	C.	Treated by incision and evacuation, as enucleation impossible from amount of burrowing. Convalescence normal.
Cystic (removed)	No	No	C.	The ovary of same side as cyst (right) was normal, and was left <i>in situ</i> . Convalescence normal.
Normal	No	Yes	C.	Treated by incision and evacuation, as adhesions to rectum were very dense, and amount of tissue between the two extremely thin. Peritoneum flushed with boric acid solution. Convalescence normal.

CASE 8. *Cystic adenoma of left ovary ; twisting of pedicle ; intra-cystic hæmorrhage ; abdominal section ; recovery.* (From notes by Mr. Gates.)—H. H—, æt. 29, married, residing at Stockwell ; admitted June 3rd, discharged July 2nd, 1897. Catamenia commenced at the age of fourteen, and recurred regularly every thirty days, flow lasting four days and being unaccompanied by pain. Married three years ago, and has given birth to two full-time children, the last being born in February of this year. Both puerperal periods were uncomplicated. Patient had one natural period after birth of the second child ; the next period did not appear, but four days later she had an attack of severe crampy pain in the left iliac region, lasting about three hours ; this was on May 1st or 2nd. A second attack of pain in the same region occurred three days later, lasting four hours, and at the termination of this attack she first noticed a small swelling in the same situation. There was no recurrence of pain until June 1st, two days before admission, when she had a very severe attack, the pain radiating from left iliac region towards umbilicus and thigh ; this was accompanied by vomiting. The attack lessened in intensity on June 2nd.

On admission, patient is a well-nourished woman with an anxious expression. Temp. 99° ; pulse 104, of moderate volume and power. Nothing abnormal detected in heart or lungs ; breasts are full and somewhat tender. Abdomen is tender to touch and considerably distended in its lower half, and moves very slightly on respiration ; the prominence is central, and rises to a point one inch above umbilicus ; abdominal walls rigid, preventing accurate mapping out of tumour, which, however, seems globular and cystic, and is dull over the whole of its extent except centrally over its upper two or three inches. No dulness in flanks. No part of tumour can be felt in pelvis *per vaginam*. Urine sp. gr. 1024, acid, high-coloured ; no albumen or sugar.

Operation (June 4th).—An incision $3\frac{1}{4}$ inches in length was made in mid-line between umbilicus and pubes ; when peritoneum was opened a small amount of inflammatory blood-stained fluid was noticed. The cyst lay immediately under the wound, and was of a purplish colour.

On introducing the hand two of the smaller loculi of the

cyst ruptured, and a quantity of dirty-looking blood-stained fluid escaped; no adhesions or evident peritonitis noticed. The tumour was found to arise from the left side, and to lie in front of the uterus; right appendages were free and normal. The cyst was now drawn out of the wound and found to be greatly congested and marked by hæmorrhages in its walls. There was a distinct pedicle of which the Fallopian tube formed a part, and the situation of the twist was evident (twist included one and a half turns). The pedicle was now transfixed and tied with interlaced silk ligatures as close to uterus as possible, and then divided. The abdomen was flushed with boric acid solution at temperature of 107° , and a considerable amount of somewhat offensive blood-stained material washed away. The abdominal wound was then closed by means of five "through and through" silkworm-gut sutures, and before tying them the rectal aponeurosis was united by a continuous catgut suture. The tumour removed was a multilocular ovarian cyst the size of a large cocoa-nut with the outer $2\frac{1}{2}$ inches of the œdematous Fallopian tube; the cyst wall was everywhere thickened, softened and infiltrated with blood. A pint of fluid was collected from the cysts, and this coagulated spontaneously.

5th.—Temp. 98.2° , pulse 120, respirations 28. Patient passed a quiet night, but did not sleep; she vomited once immediately after the operation, but not since. Catheter has been passed twice.

6th.—Temp. 99.8° , pulse 114. Yesterday afternoon patient was violently sick, bringing up about a pint of clear green fluid with strong odour of ether; this greatly relieved her.

7th.—Bowels opened well this morning by enema after Pil. Col. \bar{c} Hyos. had been given (castor oil was tried, but produced sickness). Temp. 99.4° .

10th.—Patient making satisfactory progress; she eats and sleeps well, and has no abdominal pain. Temp. 98° , pulse 72.

11th.—Stitches taken out to-day; wound healthy.

14th.—Temperature has reached 100° the last three days; it is 99° this morning. Bowels well open; no pain; patient sleeps well, but has little appetite.

17th.—Temperature did not rise above normal yesterday ; it is $98\cdot2^{\circ}$ this morning.

19th.—Patient got up for the first time last evening, and is none the worse for it.

26th.—Temperature has been normal the last week ; wound has healed well ; patient gaining strength. *Per vaginam* (by Dr. Cullingworth) ; the uterus is fairly moveable ; there is no abnormal thickening on the right side ; on left side there is some little thickening in situation of the pedicle, but no hardness, tenderness, or fixation.

30th.—Measurements as compared with June 4th before operation :

	June 4th.	June 30th.
Girth at umbilicus	$37\frac{3}{4}$	$32\frac{1}{2}$
Girth one inch below umbilicus	$38\frac{1}{2}$	34
From ensiform to umbilicus	$6\frac{1}{4}$	$5\frac{3}{4}$
From umbilicus to pubes	$6\frac{1}{2}$	6

July 2nd.—Patient leaves the hospital to-day quite well.

CASE 18. *Large fibroma of left ovary ; abdominal section ; ovariectomy ; recovery.* (From notes by Mr. Bevan.)—P. C—æt. 21, single, residing at Brixton ; admitted October 16th, discharged November 17th, 1897. Catamenia commenced at the age of thirteen, and have been fairly regular ever since, of thirty-day type, lasting four days, and unaccompanied by pain, excessive amount, or clots. Present illness dates from two years since, when patient first noticed some “ swelling and hardness ” of lower abdomen. This tumour has gradually increased in size, but never caused her any pain or inconvenience. She has not lost flesh, nor has she had any difficulty in or increased frequency of micturition. She first consulted a doctor a fortnight ago, and then only because of the size of her abdomen.

On admission patient is a healthy-looking girl. Nothing abnormal detected in heart or lungs. Temperature normal ; urine sp. gr. 1020, acid, no albumen or sugar. There is marked prominence of abdomen from pubes up to 2 inches above umbilicus ; this swelling is central, and does not extend into the flanks ; it is dull over its whole extent, and on palpation is found to be a solid, hard, inelastic tumour rising

out of the pelvis to $3\frac{1}{2}$ inches above umbilicus ; it is smooth and rounded, and measures 10 inches transversely at level of umbilicus. A sense of weight is given to the examining hands ; tumour is slightly moveable from side to side. Circumference of abdomen at level of umbilicus is 29 inches, and $2\frac{1}{2}$ inches lower the measurement is $30\frac{1}{2}$ inches. *Per vaginam* : uterus is pushed forwards by the lower part of the tumour, which occupies the whole of the posterior part of the pelvis ; the uterus can be moved independently of the tumour ; uterine sound passes the normal distance. Bladder sound passes 4 inches.

Abdominal section (October 26th).—Preliminary incision from just below umbilicus to 2 inches above pubes ; on opening peritoneal cavity a small amount of ascitic fluid escaped. The tumour presented at the wound ; the hand was introduced and tumour found to be free from adhesions anteriorly and at the sides ; the incision was then enlarged to a length of 6 inches and the tumour brought outside the abdomen. Posteriorly some recent vascular adhesions were found to the intestines and vermiform appendix ; small clamp forceps were applied and the adhesions divided. The pedicle, which consisted of broad ligament including left Fallopian tube, was transfixed and tied by interlacing silk ligatures, and then divided and the tumour removed. The adhesions, previously clamped, were tied with fine silk. The right ovary was found to be cystic ; it was punctured and then returned into the abdomen. The peritoneum was sponged out, and abdominal wound closed by silkworm-gut sutures, the rectal aponeurosis being united by a continuous catgut suture. The operation lasted about an hour. The parts removed consist of a large, heavy, solid, oblong tumour of left ovary ; its lower part forms a fairly accurate cast of the true pelvis ; the tumour expands as it rises into the abdomen. The tumour is rounded anteriorly, flattened posteriorly where the divided adhesions to bowel and omentum are seen. Dimensions : length $10\frac{1}{2}$ inches, greatest girth $18\frac{1}{2}$ inches, thickness 5 inches ; it weighs 5 lbs. 6 oz. On section the structure appears to be highly œdematous fibrous tissue, with pseudo-cystic degeneration in the intra-pelvic part of the tumour.

27th.—Patient has slept at intervals during the night. Temp. 98.6° this morning; it reached 99.6° during the night. There has been no vomiting; urine has been withdrawn by catheter; there is no abdominal pain.

28th.—Temperature last night 99.2° ; it is subnormal this morning. Urine has been passed naturally.

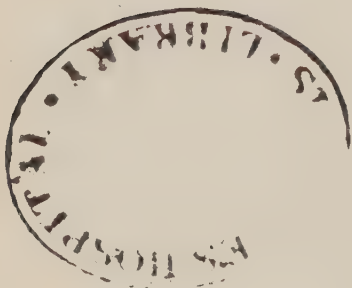
29th.—Slept well last night. A simple enema was given this morning, when some flatus was passed. Temperature about 99° during last twenty-four hours.

30th.—Bowels open well this morning after castor oil. Temperature normal. Patient taking "fancy" diet.

November 2nd.—Sutures removed to-day; wound looking healthy.

9th.—Patient got up for first time yesterday with no ill effect; appetite good; sleeps well; satisfactory progress.

17th.—Yesterday Dr. Cullingworth made a vaginal examination and found the parts quite normal. No thickening was felt. Patient leaves the hospital to-day well.





SPECIAL TABLE II.

SPECIAL TABLE II.—*Diseases of Fallopian*

No.	Name.	Residence.	Age.	Civil condition.	Date of operation.	Nature of disease.	Nature of operation.
1	L. P.	South Lambeth Road	24	M.	1896 Dec. 17	Double purulent salpingitis; pelvic peritonitis.	Both tubes removed, also left ovary
2	S. W.	Stamford Street	24	M.	1897 Jan. 14	Salpingitis, cystic ovary, L.; pelvic peritonitis.	Left tube and ovary removed
3	J. J.	Bermondsey	34	M.	Jan. 21	Double chronic salpingitis; pelvic peritonitis.	Both tubes and ovaries removed
4	A. T.	Lower Sydenham	35	M.	Jan. 22	Double purulent salpingitis; small ovarian abscess, L.; early cystic disease of right ovary.	Both tubes and ovaries removed
5	S. C.	Lambeth Walk	38	M.	Feb. 11	Salpingitis, R.; small ovarian abscess, R.; ? ovarian hydrocele, R.	Right matted appendages removed
6	A. S.	Wandsworth	30	M.	March 19	Purulent salpingitis with ovarian abscess, L.; pelvic peritonitis.	Left appendages removed
7	M. P.	Peckham	29	M.	March 19	Double catarrhal salpingitis; pelvic peritonitis.	Appendages of both sides removed except part of right ovary
8	A. W.	Walworth	36	M.	March 26	Double pyosalpinx; pelvic peritonitis.	Both tubes removed, also left ovary (cystic)
9	E. L.	New Cross	48	M.	March 28	Left pyosalpinx; pelvic abscess; ruptured.	Exploratory laparotomy
10	L. H.	Chelsea	27	M.	April 3	Chronic salpingitis, inflamed cystic ovary, R.; pyosalpinx, suppurating ovarian cyst, L.	Both tubes and ovaries removed

Tubes, including Tubal Gestation.

Drain- age tube.	Perito- neum flushed.	Result.	Remarks.
No	No	C.	Convalescence normal.
No	No	C.	Convalescence normal.
No	No	C.	Fimbriated extremity of each tube was sealed against corresponding ovary, and the latter had to be removed on each side. Patient made a good recovery.
No	No	C.	The ovarian abscess communicated directly through a small opening with lumen of dilated Fallopian tube. Patient developed scarlet fever 8 days after operation, and was transferred to isolation block, from whence she was discharged cured 45 days later.
No	No	D.	Adhesions very dense; mass removed proved to consist of inflamed right Fallopian tube, with fimbriated extremity closed against a small ovarian abscess; there was also a serous cyst below the ovary, which Mr. Shattock thought might be an "ovarian hydrocele." Patient died of peritonitis 7 days after operation, due to a small perforation in anterior wall of rectum at situation of some of the old adhesions.
No	No	D.	During operation it was found that the ovarian abscess communicated directly with sigmoid flexure (stool that morning had contained purulent material). Mr. Abbott closed the fistulous opening in gut with Lembert's sutures. Patient was very collapsed at end of operation, and intra-venous infusion was employed (saline fluid Oij, brandy ʒj). Death 4 days later from peritonitis, and post mortem the bowel was found to leak at site of old perforation when distended with water.
No	No	C.	Convalescence normal.
No	No	C.	Right tube contained half an ounce of thick non-offensive pus; left tube contained 6 drachms. Convalescence normal.
Yes	Yes	D.	Three days after admission for symptoms of inflamed pelvic cyst, patient became suddenly collapsed; abdomen was opened at once, when over 4 pints of offensive pus escaped. Patient died of shock within half an hour of operation. P.M.—A large abscess cavity found between layers of left broad ligament, into which the greatly dilated and suppurating left Fallopian tube directly opened.
No	No	C.	No direct communication existed between the pyosalpinx and the ovarian abscess, though they were adherent one to the other. Convalescence normal except for some bronchitis for 3 days.

No.	Name.	Residence.	Age.	Civil condition.	Date of operation.	Nature of disease.	Nature of operation.
11	F. B.	Kennington Road	21	M.	1897 April 8	Salpingitis, early cystic ovary, R.; broad ligament cyst, L.	Right appendages removed; broad ligament cyst tapped
12	L. D.	Chalk Farm	31	S.	April 28	Pyosalpinx, inflamed cystic ovary, R.; salpingitis, suppurating cysts of ovary, L.	Both tubes and ovaries removed
13	E. O'C.	Tottenham	34	M.	May 20	Double salpingitis; inflamed cyst of each ovary.	Both tubes and ovaries removed
14	L. L.	Clapham	34	M.	July 8	Salpingitis; pelvic peritonitis.	Left appendages removed
15	E. B.	Old Kent Road	22	M.	July 20	Double purulent salpingitis; pelvic peritonitis.	Both tubes and left ovary removed
16	A. S.	Lambeth	21	M.	July 20	Double pyosalpinx; pelvic peritonitis.	Tubes only removed; ovaries left
17	A. McC.	Aldershot	26	M.	July 22	Chronic salpingitis and cystic ovary, L.	Removal of left appendages
18	M. B.	Kettering	24	S.	July 27	Purulent salpingitis, broad ligament cyst, L.; chronic salpingitis, R.	Both tubes and left ovary removed; cyst enucleated
19	C. C.	Notting Hill	28	M.	Aug. 5	Right chronic salpingitis; early cystic left ovary.	Right tube removed; cystic ovary punctured
20	S. G.	Windsor	46	M.	Aug. 12	Hydrosalpinx, R.; purulent salpingitis, L., with abdominal abscess.	Both tubes and right ovary removed
21	P. B.	Leicester	27	M.	Aug. 12	Double chronic salpingitis; suppurating cysts of both ovaries.	Both tubes and ovaries removed
22	A. M.	Lambeth	38	M.	Aug. 17	Chronic salpingitis, cystic ovary, L.; pelvic peritonitis.	Left appendages removed
23	F. P.	East Putney	36	S.	Sept. 10	Double catarrhal salpingitis; pelvic peritonitis.	Both tubes and right ovary removed

Drain- age tube.	Perito- neum flushed.	Result.	Remarks.
No	No	C.	No attempt to enucleate broad ligament cyst was made, as patient was rather collapsed during the operation. Convalescence was rather protracted, but ultimately good recovery.
No	No	C.	Convalescence normal, except for slight pyrexia persisting for a fort- night after operation.
No	Yes	D.	Operation difficult owing to universal firm pelvic adhesions; the broad ligaments were both much thickened from inflammatory œdema. Peritoneum was flushed with boric acid solution at temp. 107°. Vomiting and abdominal distension came on 2 days after operation; no action of bowels after enemata, Mag. Sulph., &c. She died 4 days after operation, apparently of exhaustion, as no signs of peritonitis were found post mortem.
No	No	C.	Convalescence normal.
No	Yes	C.	During separation of adhesions on left side a little pus escaped into pelvis, and so peritoneum was flushed. Convalescence normal.
No	No	C.	There was only a small amount of pus in each tube. Convalescence normal.
No	Yes	C.	Peritoneum was flushed as some sero-pus from left tube contami- nated it. There was subsequent abdominal distension with obsti- nate constipation. Croton oil had to be administered before bowels acted, which they then did very satisfactorily. Rapid improve- ment set in from this time.
No	No	C.	Convalescence normal.
No	No	C.	Convalescence normal.
No	No	C.	See "Abstract."
Yes	Yes	C.	Adhesions were very firm, and during their separation the right suppurating cyst burst; a small piece of the cyst wall had to be left attached to floor of pelvis. Peritoneum was flushed with boric acid solution, and a Keith's tube used for drainage. Pus was removed per drainage-tube for a week, and once (two days after operation) a little fæcal matter. A rubber tube was sub- stituted for the glass one 2 days after operation, and gradually shortened, but it could not be finally removed until Aug. 31st, after which there was a troublesome sinus through which fæculent matter and pus continued to escape up to Sept. 17th. Sinus had not completely closed when patient was discharged on Oct. 25th; otherwise she was practically well.
No	No	C.	There were many firm adhesions separated during operation, and convalescence was interrupted by some pelvic peritonitis. Subsequently patient made a good recovery.
No	No	C.	Convalescence normal.

No.	Name.	Residence.	Age.	Civil condition.	Date of operation.	Nature of disease.	Nature of operation.
24	A. C.	Wands- worth Road	22	S.	1897 Sept. 30	Suppurative salpingitis and small suppurating ovarian cyst, R.; pelvic peritonitis.	Right appendages removed
25	M. B.	Camberwell	22	M.	Nov. 4	Double purulent salpingitis; inflamed ovaries; pelvic peritonitis.	Both tubes and ovaries removed
26	K. F.	Stamford Street	18	S.	Nov. 26	Pyosalpinx, cystic ovary, R.; purulent salpingitis, L.	Both tubes and right ovary removed
27	A. K.	Kentish Town	25	M.	April 13	Tubal mole, R.; hæmatocele.	Right tube and ovary removed
28	M. S.	Old Kent Road	34	M.	May 6	Tubal mole, R.; hæmatocele.	Right tube and ovary removed
29	A. R.	Lavender Hill	27	M.	May 27	Tubal mole, L.	Left tube and ovary removed
30	L. O.	Wands- worth Road	27	M.	Sept. 10	Tubal mole, R.; hæmatocele; retention of urine.	Right tube and ovary removed
31	E. M.	Lambeth	27	M.	Sept. 30	Tubal mole, R.; encysted unilateral hæmatocele.	Right tube and ovary removed
32	E. B.	Southwark	25	M.	Nov. 29	Tubal mole, L.; hæmatocele.	Left tube and ovary removed

Drain- age tube.	Perito- neum flushed.	Result.	Remarks.
No	No	C.	Convalescence normal.
Yes	No	C.	Adhesions extremely dense and extensive; during separation of some of them from bowel the gut gave way in two places, and was dealt with by Mr. Wallace by means of Lembert's sutures; a Keith's drainage-tube was inserted, and the injured gut placed immediately under the abdominal wound. Flatus was passed next day per long rectal tube, and 2 days after operation drainage-tube was removed. Convalescence was rapid and uneventful.
No	No	C.	Convalescence normal.
No	No	C.	The tube was unruptured; its fimbriated extremity was patulous, and through it black blood-clot extended from the mole inside the tube to the blood-clot in Douglas's pouch. Chorionic villi were found in the specimen by Mr. Shattock. The ovary removed contained a recent corpus luteum. Convalescence complicated by short attack of left lobar pneumonia. Discharged May 19th.
No	No	C.	The pregnant tube was ruptured during removal; its fimbriated extremity was patulous, and the firm blood-clot inside tube was connected by black clot through the fimbriated opening with the blood-clot in Douglas's pouch. Chorionic villi were found in the specimen by Mr. Shattock. Patient made an excellent recovery.
No	No	C.	The fimbriated extremity was closed in this case, and no blood was found outside the tube; the dilated tube was filled with soft black clot, in the centre of which an amniotic sac was easily demonstrable. The ovary was cystic, and contained a recent corpus luteum. Patient made a good recovery.
No	No	C.	See "Abstract."
No	No	C.	No free blood found in Douglas's pouch, but there was an encysted unilateral hæmatocele on right side into which the fimbriated extremity of the tube opened. Convalescence normal.
No	No	C.	The fimbriated extremity of tube was widely patulous, measuring $\frac{5}{8}$ inch across; through it projected firm blood-clot connecting the tubal mole with the hæmatocele. Dr. Jenner found chorionic villi in this specimen. Convalescence normal.

CASE 20. *Right hydrosalpinx; left purulent salpingitis with abscess formation between Fallopian tube, omentum, and abdominal wall; abdominal section; recovery.* (From notes by Mr. McLoughlin.)—S. G—, æt. 47, single, residing at Windsor; admitted July 31st, discharged September 18th, 1897. Catamenia commenced at age of eleven; the flow only occurred once, and then ceased until her twentieth year, when flow recommenced and occurred regularly up to patient's marriage in 1876 at age of twenty-five. The patient has had four children, the last, born in 1880, being premature; she suffered from "inflammation" and pain in abdomen for about six weeks after this premature labour, and she has had some yellow vaginal discharge for a few days before and after each period ever since. The patient has noticed some enlargement of abdomen for the last twelve months, and has suffered from great deal of abdominal pain during the last month.

On admission, patient is a fairly well nourished but sallow-complexioned woman; temperature subnormal; urine sp. gr. 1022, acid, no albumen.

There are signs of œdema and emphysema in both lungs; heart-sounds normal. Abdomen is markedly enlarged, especially on left side from level of umbilicus downwards; girth 37 inches, distance from ensiform cartilage to umbilicus $6\frac{1}{4}$ inches, and from umbilicus to pubes $8\frac{1}{2}$ inches.

On palpation, a hard tender mass is felt in left lower abdomen, reaching $1\frac{1}{2}$ inches to right of mid-line and also same distance above umbilicus; it is dull on percussion, fixed, and no fluctuation can be obtained; the mass can be traced down into pelvis. *Per vaginam*: cervix is pushed forwards and to left by a tense, rounded, fixed tumour in Douglas's pouch, slightly depressing posterior fornix; uterine sound passes $3\frac{1}{2}$ inches upwards and towards left; uterus can be moved independently of swelling in Douglas's pouch.

Abdominal section (August 12th.)—Median incision four inches long; the omentum was found to be enormously thickened, and adherent to abdominal wall, and during separation of adhesions a little thick pus escaped. Hand introduced and swelling in Douglas's pouch first dealt with, and after some recent adhesions to broad ligament were separated it was brought outside abdomen and found to be

a right hydrosalpinx of typical retort shape, and having the ovary spread out over it; this was removed by tying its pedicle with interlaced silk ligatures. The adhesions between omentum and abdominal wall were now separated with difficulty; it formed a mass roughly 6×4 inches and an inch thick; the left Fallopian tube was traced into this mass. The whole mass was removed after ligaturing the omentum near the transverse colon and the Fallopian tube close to the uterus. *Parts removed*: the right hydrosalpinx measures $9\frac{1}{4}$ inches in length and 8 inches at greatest girth; it contains clear serous fluid, and has the ovary flattened out over it. The walls of the tube are thinned, and the whole specimen is translucent. The mass from left side includes the outer two inches of the suppurating left Fallopian tube, with fimbriated extremity opening into a small abscess cavity surrounded by the greatly thickened, almost cartilaginous omental mass removed. The wall of the tube is $\frac{1}{3}$ inch in thickness, and its mucous membrane swollen and œdematous but not ulcerated.

13th.—Patient had morphine injected last evening, but had a restless night; she complains of great abdominal pain; temp. 101.2° . There has been no vomiting.

17th.—Temperature about 99° the last two days; abdominal pain still continues, but was somewhat relieved yesterday by castor oil, which acted well. No tendency to sickness.

20th.—Temperature higher, was 101.2° last evening; abdominal pain continues, especially over region from which omental mass was removed

21st.—Wound dressed; some reddening round lowest stitches, no suppuration; temp. 102° this morning.

23rd.—No better; temp. 103.8° ; some difficulty in breathing; left lung shows signs of considerable œdema. Brandy \mathfrak{z} iv per diem ordered.

25th.—Temperature rose to 103.4° again yesterday; phenacetin gr. xx was given with temporary benefit as regards temperature.

30th.—Patient now improving; left lung clearing up, breathing easier, and temperature falling slightly (99.6°). Patient has had several doses of phenacetin gr. x since last note, but with only temporary lessening of pyrexia.

September 3rd.—Patient was on the sofa last evening with benefit ; temperature still keeps about the normal ; cough and breathing very much easier, abdomen comfortable, and bowels acting well. She is troubled with night sweats, and is now taking Mist. Ammon. \bar{c} Senega.

7th.—Night sweats still troublesome, and temperature unsatisfactory ; otherwise patient is improving markedly.

11th.—Temperature now normal ; left lung quite cleared up, except that there is now a small area of friction in axilla.

16th.—Steadily improving ; night sweats no longer troublesome ; patient sleeps and eats well. Temp. 98.4° .

17th.—*Per vaginam* (by Dr. Cullingworth) : no abnormal swelling detected in pelvis, and the parts are freely moveable. Patient going out to-morrow.

CASE 30. *Right tubal gestation ; incomplete tubal abortion ; pelvic hæmatocele ; retention of urine ; abdominal section ; recovery.* (From notes by Mr. Ambrose.)—L. O—, æt. 27, married, residing in Wandsworth Road ; admitted September 4th, discharged October 2nd, 1897. Catamenia commenced at age of eleven and were regular up to marriage six years ago, but were always accompanied by some pain during the flow, which latter lasted three to four days. Patient has had two children and one miscarriage, the latter occurred three years ago, when patient was about three months pregnant ; she cannot give any cause for the miscarriage occurring. Her youngest child was born two years and three months ago, since which time she has not been pregnant until the present illness.

Present illness.—Patient's last period occurred about six months ago ; she first noticed a swelling in the lower part of the abdomen two months ago, and suffered from that time from more or less severe abdominal pain of a bearing-down character ; up to three weeks before admission there had been a constant slight pinkish vaginal discharge, since when discharge had been more hæmorrhagic but only slight in amount. Four days ago patient was seized with severe pain in lower abdomen, and felt sick and faint though she did not vomit ; since then she has suffered from retention of urine, and has been using a catheter herself.

On admission abdomen was enormously distended, but on a catheter being passed $2\frac{1}{2}$ pints of urine were withdrawn, with consequent shrinkage in size of abdomen. Nothing abnormal detected in heart or lungs; urine sp. gr. 1020, acid, no albumen or sugar. There is distinct enlargement of lower abdomen, a cystic swelling rising out of pelvis and reaching to a level 1 inch above umbilicus being made out; this is not moveable, and is dull on percussion; no free fluid detected in abdomen. *Per vaginam*: uterus is raised and pushed forwards and to left by a large fixed swelling occupying Douglas's pouch, continuous with abdominal swelling; this depresses posterior fornix; cervix is much raised, being on level with top of symphysis pubis; uterine sound passes $3\frac{1}{4}$ inches upwards and to left.

Abdominal section (September 10th).—A median incision three inches in length was made; when peritoneum was opened no free fluid found in abdominal cavity; the bladder projected into the wound, and a sound was passed to ascertain its position and extent. The hand was now passed into abdomen, when the true pelvis was found to be completely filled by a fixed lobulated swelling; the swelling was very tense and very adherent to pelvic wall, rectum, and uterus. Cyst wall gave way during separation of adhesions, revealing a large cavity from which black blood-clot escaped in considerable quantity. The tumour having at length been carefully separated from its various adhesions was found to be in situation of right Fallopian tube and adjacent structures; it was removed by tying the pedicle with interlaced silk ligatures; the ovary was divided in the pedicle; left appendages found somewhat fixed but otherwise normal. Abdomen was flushed with boric acid solution, several clots being washed out. The abdominal wound was closed in the usual way with "through and through" silk-worm-gut sutures, and a continuous catgut suture for the rectal aponeurosis. Parts removed consist of right appendages with over 2 pints of black blood-clot; the total mass measures $5\frac{3}{4} \times 3\frac{3}{4} \times 1\frac{3}{4}$ inches; the part of ovary in the mass is œdematous and cystic; the outer surface of the blood-cyst is mostly smooth. On enlarging the opening into the cyst its walls are found to be ragged internally

with remains of altered blood-clot. Projecting into this cystic swelling from inner extremity is the dilated Fallopian tube with fimbriated extremity widely open and blood-clot projecting from it. The Fallopian tube is $3\frac{1}{2}$ inches long, and is dilated to a diameter of $1\frac{1}{2}$ inches in its outer third, which is filled by firm and adherent blood-clot. Dr. Jenner afterwards reported that "the wall of the blood-cyst consists entirely of a fibro-cellular connective tissue and blood; chorionic villi are demonstrable, but no embryo."

11th.—Temp. 99.4° ; complains of thirst and some abdominal pain; urine is being withdrawn by catheter; there is no vomiting.

13th.—Abdominal pain ceased this morning; patient passed urine naturally yesterday; temperature normal, it reached 99.8° yesterday afternoon; simple enema given this morning with good result.

14th.—Patient progressing well; feels comfortable.

15th.—Dressings changed to-day, wound looking healthy.

18th.—Stitches were removed yesterday; wound healing well; temperature varies between 99° and 100° , but patient seems very well.

24th.—Patient got up yesterday with benefit; temperature normal this morning.

October 1st.—*Per vaginam* (by Dr. Cullingworth): some matting of pelvic organs on right side; no tenderness; condition very satisfactory; patient going out to-morrow.

SPECIAL TABLE III.

SPECIAL TABLE III.—*Laparotomy for Conditions*

No.	Name.	Residence.	Age.	Civil condition.	Date of operation.	Nature of disease.	Nature of operation.
1	E. E.	Romford Common	26	M.	1896 Dec. 31	Pelvic peritonitis; thickening of sigmoid flexure; ? cause.	Exploratory laparotomy
2	M. O.	Windsor	40	M.	1897 Jan. 21	Fibro-myomata of uterus; hæmorrhage.	Oöphorectomy
3	E. G.	Tunbridge Wells	46	M.	Feb. 4	Fibro-myomata of uterus; menorrhagia 6 years.	Oöphorectomy
4	M. A.	Reading	26	S	Feb. 18	Fibro-myomatous uterus; hæmorrhage 12 months.	Abdominal hysterectomy
5	E. H.	Camberwell	38	M.	March 11	Fibro-myomata of uterus; menorrhagia 14 months.	Oöphorectomy
6	L. C.	Lavender Hill	21	M.	March 25	Tubercular retro-peritoneal gland tumour; miliary tubercles on visceral and parietal peritoneum.	Exploratory laparotomy
7	E. R.	Streatham Hill	38	M.	March 26	Obstructed labour (uterine fibroids).	Cæsarean section
8	M. G.	Kentish Town	33	M.	April 1	Carcinomatous peritonitis; ascites.	Exploratory laparotomy
9	E. B.	Kennington Park	52	W.	April 1	Large retro-peritoneal cyst.	Exploratory laparotomy; enucleation
10	J. S.	Stamford Hill	48	S.	April 9	Fibro-myomata of uterus; menorrhagia and dysmenorrhœa 3 years.	Abdominal hysterectomy

other than Diseases of Ovary and Fallopian Tube.

Drain- age tube.	Perito- neum flushed.	Result.	Remarks.
No	No	R.	Operation was performed for mass in left pelvis, with history of repeated attacks of pelvic peritonitis for 8 years. At operation pelvic tumour found to be thickened sigmoid flexure with surrounding adhesions; cause of thickening not made out. Nothing further done. Recovery good.
No	No	R.	Excellent recovery from operation. Discharged Feb. 27th, when examination showed distinct shrinking in size of uterine tumour.
No	No	R.	Good result. Tumour had undoubtedly got smaller when patient was discharged March 8th.
No	No	D.	Hysterectomy was performed as patient was losing dangerous amount of blood, and rapidly going down hill. Tumour was an cedematous interstitial fibroid of anterior uterine wall. The condition of the patient was never satisfactory after operation, and she died 9 days later of peritonitis. No evidence P.M. where peritonitis had started.
No	No	R.	When patient was discharged 5 weeks after operation, tumour had distinctly shrunk.
No	No	R.	History of pelvic pain with pyrexia starting 3 months after marriage. <i>Per vaginam</i> a hard mass felt to left and behind uterus, fixed. At operation peritoneum found studded with miliary tubercles, and pelvic mass proved to be retro-peritoneal and glandular. Nothing further attempted. Convalescence was retarded by gaping of abdominal wound, which took a long time to heal.
No	No	D.	In labour 12 hours when admitted; cervix dilated; pelvis blocked with fibroids of lower uterine segment. Patient developed symptoms of paralysis of bowels 2 days after operation. Abdomen opened next day, and gut punctured in two places to relieve distended coils. No signs of peritonitis seen then, but patient died next day, and P.M. general peritonitis found. Infant did well.
No	No	D.	History of abdominal pain and swelling 3 years. Several hard nodules felt <i>per vaginam</i> . At operation numerous small nodules, thought to be tubercular, found on omentum and peritoneum. Nothing further attempted. Patient died of exhaustion 5 days later, and P.M. the morbid growths found to be malignant. There was a primary growth in small intestine and secondary deposits in liver.
No	No	C.	See "Abstract."
No	No	C.	Convalescence was interrupted by suppuration of a considerable amount of blood, which had evidently leaked from stump. This collection burst through abdominal wound 13 days after operation. From this time patient made rapid progress, and was discharged well May 21st.

No.	Name.	Residence.	Age.	Civil condition.	Date of operation.	Nature of disease.	Nature of operation.
11	K. W.	Clapham Common	26	M.	1897 May 6	Pelvic abscess; tubercular peritonitis.	Exploratory laparotomy; drainage of pelvic abscess
12	L. H.	Wands-worth	50	M.	June 10	? Malignant or tubercular disease of omentum and peritoneum; encysted ascites.	Exploratory laparotomy
13	E. S.	Brixton	23	S.	July 14	Intra-peritoneal abscess (? vermiform appendix).	Exploratory laparotomy
14	M. B.	Herne Hill	43	S.	July 29	Interstitial and subperitoneal fibroids of uterus.	Oöphorectomy, myomectomy
15	K. B.	Regent's Park	28	M.	Aug. 3	Large subperitoneal uterine fibroid.	Laparotomy, myomectomy
16	L. C.	Brixton	31	M.	Sept. 23	Tubercular peritonitis; ascites; early cystic and inflamed right ovary.	Exploratory laparotomy
17	E. B.	Blooms-bury	50	W.	Oct. 13	Procidentia uteri.	Ventro-fixation of uterus
18	E. R.	Camberwell Road	33	M.	Oct. 21	Myomatous uterus; right interstitial pregnancy with early rupture; retention of urine.	Abdominal hysterectomy

Drain- age tube.	Perito- neum flushed.	Result.	Remarks.
Yes	No	C.	History of 5 months' pelvic pain. <i>Per vaginam</i> tense cystic swelling to right of uterus, fixed. At operation peritoneum found studded with tubercles. Dense adhesions round pelvic swelling, which ruptured during manipulation, some inoffensive pus escaping. Abscess cavity drained for 7 days. Good recovery.
No	No	R.	History of 4 months' abdominal pain and enlargement with dysuria. At operation 13 pints ascitic fluid removed, and it was then found that omentum, liver, and parietal peritoneum were studded with nodules of doubtful nature. Nothing further attempted. Patient left the hospital considerably improved.
Yes	Yes	C.	History of pelvic pain and dysmenorrhœa. <i>Per vaginam</i> cystic fixed mass in right posterior quarter of pelvis. At operation a pelvic abscess found surrounded by coils of intestine; vermiform appendix could be traced into the mass. Drainage carried out for 10 days. Excellent recovery.
No	No	R.	Convalescence normal except for slight attack of pleurisy. Discharged Aug. 21st.
Yes	No	D.	Tumour was size of quarter loaf, and was growing between layers of right broad ligament, springing from posterior wall of uterus. There was severe hæmorrhage during operation from large venous sinuses of broad ligament, &c. Patient suffering from severe shock and loss of blood towards end of operation, so brandy enema was given. On being got back to bed she became moribund, with cessation of respiration. Under artificial respiration and intravenous injection of saline and brandy she rallied temporarily, but died 2 hours later.
No	No	R.	Four months' history of abdominal enlargement. <i>Per vaginam</i> elastic swelling in Douglas's pouch. At operation 16 pints clear ascitic fluid escaped; peritoneum found studded with tubercles; dense adhesions found round pelvic swelling, which was tapped <i>per vaginam</i> , and 13 ounces blood-stained fluid withdrawn. Convalescence was protracted owing to imperfect drainage of pelvic cyst <i>per vaginam</i> . Recovery ultimately good.
No	No	C.	Previous to this operation the hypertrophied supra-vaginal cervix had been removed by amputation. Both operations were eminently satisfactory.
No	No	C.	Patient had been an inmate of Adelaide Ward about a month previously for retention of urine and amenorrhœa, and was treated for supposed retroversion of gravid uterus, mass in Douglas's pouch being partially replaced. She was admitted again on Oct. 1st complaining of abdominal pain, dysuria, and blood-stained vaginal discharge. Exploratory laparotomy disclosed a myomatous uterus, complicated by presence of a dead 3½ months' fœtus in Douglas's pouch; the fœtus had apparently escaped by early rupture from a right interstitial pregnancy, subsequently developing up to about 3½ months. The fœtus and uterus with appendages of both sides removed in one mass. The specimen was shown and described at the Obst. Soc. Lond. by Dr. Cullingworth. Recovery good. Patient discharged well Nov. 12th.

No.	Name.	Residence.	Age.	Civil condition.	Date of operation.	Nature of disease.	Nature of operation.
19	A. W.	Ringwood, Hants	38	M.	1897 Oct. 28	Pelvic peritonitis; ? malignant infiltration of cellular tissue of right side of pelvis; inflamed cystic ovary, R.; cystic kidney, R.	Exploratory laparotomy; ovariectomy, R.
20	A. M.	Deptford	34	S.	Oct. 7	Fibro-myomata of uterus (one necrotic); hæmorrhage; abdominal pain.	Abdominal hysterectomy
21	M. T.	Stroud	39	M.	Nov. 18	Fibro-myomata of uterus; menorrhagia 5 years.	Abdominal hysterectomy
22	E. G.	Camberwell	56	M.	Nov. 19	Sarcomatous disease of pelvic and parietal peritoneum; slight ascites.	Exploratory laparotomy

Drain- age tube.	Perito- neum flushed.	Result.	Remarks.
No	No	R.	History of 12 months' dysmenorrhœa and rectal pain. <i>Per vaginam</i> a hard fixed mass to right of uterus. <i>Per abdominem</i> an enlarged cystic kidney (Dr. Sharkey suggested that latter might be secondary to pressure on right ureter by the pelvic mass). At operation a greatly inflamed cystic ovary was found on right side, embedded in extremely hard and dense tissue (? inflammatory or neoplastic). Patient improved somewhat after operation, but the hard pelvic mass did not diminish in size. Patient was discharged Nov. 28th.
No	No	C.	See "Abstract."
No	No	C.	Convalescence normal.
No	No	R.	History of 4 months' abdominal and rectal pain. <i>Per vaginam</i> hard, almost cartilaginous swelling in Douglas's pouch, fixing cervix. At operation omentum and parietal peritoneum were found studded with hard nodules of varying size; the mass in pelvis extremely fixed. A small piece of omental growth was removed for examination by Mr. Shattock, who reported it to be sarcomatous. Patient made a good recovery from the operation, and went out feeling comparatively well.

CASE 9. *Large retro-peritoneal cyst of left side ; unilocular ; abdominal section ; subsequent development of small abscess in bed of enucleated cyst ; recovery.* (From notes by Mr. Hall.)
—E. B—, æt. 52, widow ; admitted March 26th, discharged May 26th, 1897.

Catamenia commenced at age of twelve, and were always regular up to her marriage twenty years ago, periods recurring every twenty-four days, lasting three to four days, and being usually unaccompanied by pain.

Patient has had five children and one miscarriage ; the menopause occurred ten years ago, and patient has been a widow five years. Present illness commenced eight months ago with gradual enlargement of the abdomen, and for last two months there has been slight difficulty in micturition and also obstinate constipation ; there has been no abdominal pain or vomiting, but patient has lost appetite and complains of general weakness.

On admission patient is a fairly well-nourished, somewhat anæmic woman ; temperature subnormal ; urine sp. gr. 1028, acid, large amount of urates, no albumen or sugar. Nothing abnormal detected in heart or lungs, except that apex-beat of heart is pushed upwards into fourth space by the abdominal swelling. The abdomen is almost uniformly distended by a cystic swelling which apparently arises out of pelvis and reaches up nearly to costal margin ; this swelling is tense and elastic, and gives a well-marked fluid thrill. There is complete dulness over the tumour, which means practically the whole abdomen, there being a narrow band of resonance between tumour and costal margin, and also in each flank in situation of colon ; this latter resonance seemed displaced backwards towards the spine, especially on the left side. Measurements :

Greatest girth is at umbilicus, and measures . . .	34½ inches.
From right anterior superior iliac spine to umbilicus . .	7¾ „
„ left „ „ „ „ . . .	7½ „
„ symphysis pubis to umbilicus	7½ „
„ ensiform cartilage „ „	8 „

Per vaginam the abdominal cystic swelling can be felt to extend down into the pelvis in front of the uterus and to

slightly depress the anterior fornix. Uterus in mid-line and moveable.

Abdominal section (April 1st).—The usual median incision was made four inches in length, and this was afterwards increased to six inches; no free fluid found in abdominal cavity. Hand introduced, and a few adhesions between cyst and abdominal wall on left side were separated. The pelvis was now explored, and both ovaries and tubes found healthy. The cyst was evidently covered with peritoneum, and was at first thought to be a broad ligament cyst of left side which had burrowed up behind peritoneum; the mesosalpinx, however, was found to be free, which was thought to be against this view. The cyst was now tapped by means of trocar and cannula, and 9 pints clear straw-coloured fluid withdrawn. Spencer Wells cyst forceps now applied and tumour partly withdrawn through abdominal wound, when it was found that it extended far up to the left under the ribs. Enucleation was next proceeded with, and this proved fairly easy, the peritoneum stripping off the cyst wall proper without much difficulty; the peritoneal covering of cyst was replaced in abdomen, forming a considerable mass, and abdominal wound closed by silkworm-gut sutures with a continuous catgut suture for the rectal aponeurosis. The cyst removed was unilocular, and its wall was distinctly laminated in some parts; the fluid withdrawn is of sp. gr. 1012, and contains a small amount of albumen.

2nd.—Rather restless night after the operation; no vomiting; temp. 99.8° ; pulse 112, fair volume. Some abdominal uneasiness. Urine drawn off by catheter.

4th.—Temp. 99.2° ; passing urine naturally; complains a good deal of abdominal discomfort, and is occasionally sick, vomit being clear and of green colour; was given Liq. Morph. Hydr. \mathfrak{mxxx} last evening, and afterwards had a quiet night. Flatus passed this morning after a simple enema given.

5th.—Had morphine again last night; vomiting is rather troublesome; a small constipated motion resulted from castor oil followed by enema; temperature normal.

7th.—Vomiting still troublesome; temperature normal; wound dressed yesterday, looks healthy.

9th.—Upper stitches taken out yesterday, wound healing well; vomiting ceased. Bowels open after “H. S. Co.”

22nd.—Patient was making satisfactory progress up to yesterday, when temperature rose to 99.4° and vomiting returned; patient complains of faintness and some pain in left lower abdomen.

27th.—Temperature has been higher the last few days, reaching 102° on 25th; fluctuation detected in left iliac fossa.

29th.—Abscess in left iliac fossa having been diagnosed, an incision was made one and a half inches internal to anterior superior iliac spine, and immediately under abdominal wall the abscess cavity was reached, and about half an ounce of somewhat offensive pus was evacuated; there was also some gas in the abscess cavity. Cavity was syringed out and a drainage-tube inserted.

30th.—Patient feels more comfortable; temp. 100.2° ; a little pus has come away after syringing this morning.

May 5th.—Temperature normal; hardly any discharge from wound; drainage-tube taken out.

8th.—Patient progressing well. She got up yesterday; temperature normal; sinus almost closed.

20th.—Marked improvement; wound quite closed; patient is gaining flesh and strength daily.

26th.—Patient going out to-day well.

CASE 20. *Multiple interstitial fibro-myomata of uterus, one partially necrotic; menorrhagia; abdominal pain; abdominal hysterectomy; recovery.* (From notes by Mr. McLoughlin.)
—A. M—, æt. 34, single, residing at Deptford; admitted September 25th, discharged November 5th, 1897. Catamenia commenced at age of twelve, and have always been regular up to present illness, recurring every three weeks, lasting six days, and usually being accompanied during the first two to three days of flow by pain and occasional sickness; flow usually scanty and dark coloured.

Present illness dates from twelve months ago, when she was first attacked by sharp stabbing pain in lower abdomen, accompanied by a white vaginal discharge; latter has continued ever since and has lately become yellowish, never

offensive ; the abdominal pain has been more or less constant, and has become more localised to left inguinal region. Her periods have become very profuse, with passage of clots, and now last a fortnight, there being only a week's interval from the end of one period to the commencement of the next. Two months ago, during one of her acute attacks of pain, patient first noticed a swelling in lower abdomen, and at same time for space of twenty-four hours she had retention of urine, followed by increased frequency for a day or two. Since then the tumour has been distinctly increasing in size, and there has been an almost continuous vaginal loss. Loss of flesh and appetite are complained of the last month.

On admission patient is a thin sallow woman with pinched features ; there is a hæmic bruit over apex and base of heart ; pulse 104, full, but of low tension ; temperature $99\cdot6^{\circ}$; urine sp. gr. 1026, acid, no albumen, sugar, or blood. The abdomen presents a marked prominence in its lower and left quarter, rising to just above and to left of umbilicus. This tumour on palpation gives the impression of being cystic in its upper part, and hard and solid below ; it can be moved laterally, but not in the vertical direction ; there is no tenderness to manipulation ; the tumour is dull on percussion ; a distinct furrow can be made out between the upper (? cystic) part of the tumour and the rest of the mass. The greatest width of the tumour is seven inches, which is also the distance from pubes to highest point of tumour. Both flanks are resonant ; no enlargement of abdominal veins present.

Per vaginam : the anterior vaginal wall is slightly bulged backwards by the lower part of the abdominal swelling, which is the enlarged and anteflexed uterus ; the abdominal swelling is continuous with the cervix, and moves with it to the limited extent to which cervix is moveable. The uterine sound passes six inches, first to the left behind the mass, and then curls round the softer portion of the tumour, finally passing towards the right. Bladder sound passes four inches upwards and to the right, three and a quarter inches upwards and to left, and three inches in mid-line.

Abdominal hysterectomy (October 7th).—A median incision

was made, $5\frac{1}{2}$ inches in length : on peritoneum being opened a small quantity of free fluid was evident in abdominal cavity. The intestines were kept back by a large flat sponge, and the tumour was brought out through abdominal incision, proving to be a fibro-myomatous uterus. The left broad ligament was then transfixed by artery forceps below and internal to ovary, and the opening enlarged by separating the blades of the forceps ; two silk ligatures were then passed through this opening and tied, one close up to left cornu of uterus around Fallopian tube to control reflux of blood from uterus, the other outside the ovary around the infundibulo-pelvic ligament including the ovarian artery. Next the uterine artery of same side was found and tied in continuity by transfixing the broad ligament with a pedicle needle from before backwards immediately internal to artery, and then bringing it forwards through the broad ligament again just outside the artery ; by this means a silk ligature was passed round the vessel and tied. The right broad ligament and uterine artery were then treated in the same way ; both broad ligaments then divided external to the ovaries down to side of uterus. Peritoneal flaps were now dissected off from anterior and posterior walls of uterus, and the uterus cut through finally about level of internal os. There was practically no hæmorrhage from the stump. The peritoneal flaps were next united over the stump by means of Lembert's sutures of fine silk, and the free edges of the cut broad ligaments similarly united. Douglas's pouch was sponged out carefully, and then the abdominal wound closed by means of "through and through" silkworm-gut sutures, a continuous catgut suture being employed to unite the rectal aponeurosis. Patient was somewhat collapsed towards end of operation, and she was given $\frac{1}{24}$ grain of strychnine hypodermically. Parts removed consist of the fibro-myomatous uterus with appendages of both sides ; the mass measures $5\frac{3}{4} \times 5\frac{1}{2} \times 3\frac{3}{4}$ inches ; the fundal end of the tumour is somewhat smaller than the pelvic part, and is the seat of a soft fibroid which before operation gave the idea of a cyst. The uterine canal passes up the posterior surface of the tumour for four inches. On section the upper soft fibroid is found to have undergone

marked oedematous change; it projects distinctly into the interior of the uterus. The lower fibroid is fleshy in appearance, of a bluish-pink colour, and has a peculiar odour as of stale fish, having evidently undergone some necrotic change. The right ovary is normal, and so is the left, which contains a recent corpus luteum.

October 8th.—After operation temperature fell to 97.2° , but rose during the night to 99° . Urine has been withdrawn by catheter. Patient was sick once shortly after operation, not since. She had an attack of faintness this morning, and was given *Liq. Strych. Hydr.* $\text{m} \text{v} \text{ij}$ hypodermically. She is taking hot water and barley water and brandy $\text{z} \text{ij}$ every two hours.

9th.—Temperature rose to 100° last night, and is 99° this morning. Flatus has been passed; patient is passing urine naturally now; there is a very slight bloodstained discharge from the vagina.

11th.—Patient complains of great depression of spirits, but is better since bowels have been opened this morning after castor oil. Temperature normal this morning; patient does not sleep well, but is otherwise making satisfactory progress; no abdominal distension. She is now taking milk and beef tea as well as the brandy.

14th.—Patient now sleeping better; temperature practically normal since 10th. She is now taking “fancy” diet, and is doing without the brandy. Bowels are open regularly. *Mist. Ferri c̄ Strychninæ* ordered to-day. Stitches taken out, wound healing well.

18th.—Marked improvement since last note; colour much better, appetite good, and she sleeps well. She is taking a pill of aloes and strychnine for constipation, which acts well. The vaginal discharge has ceased.

22nd.—Patient got up last evening on to the sofa, and enjoyed the change; she complained of some throbbing pain in left side of abdomen on her return to bed, but this has since passed off.

November 1st.—Patient practically well; she can walk the length of the ward without fatigue, and is rapidly regaining strength and colour.

5th.—Going out to-day well.

STATISTICAL REPORT

OF

THE OPHTHALMIC DEPARTMENT

FOR THE YEAR 1897.

By EMILIUS HOPKINSON, B.A.Oxon., M.R.C.S., L.R.C.P.,
LATE OPHTHALMIC HOUSE SURGEON.

DURING the year there were 4016 new out-patients (exclusive of renewed letters), and 231 admissions relating to 189 in-patients; 229 major operations were performed.

General Statement of Ophthalmic Patients.

Number of beds in Ophthalmic Ward (including small ward)	...	...	25
Number of patients in ward, Jan. 1st, 1897	...	...	18
„ „ „ Dec. 31st, 1897	...	...	18
„ of discharges or deaths in 1897	...	...	231
	Male.	Female.	Total.
Discharged cured	61	64	125
„ relieved	44	51	95
„ unrelieved or for other causes	7	3	10
Died	1	0	1
	113	118	231

Average number of days in hospital—24·2.

(Infectious cases, of which there were three during the year, are treated in No. 8 block. These cases are included in the report.)

The death was due to intestinal obstruction—ileus paralyticus.

Table of In-patients.

Catarrhal conjunctivitis	2	Albuminuric retinitis	1
Diphtheritic conjunctivitis	1	Detachment of retina	1
Purulent conjunctivitis	1	Glaucoma, acute or subacute	3
Ophthalmia neonatorum	1	„ chronic	3
Trachoma	1	„ secondary	3
Interstitial keratitis (syphilitic)	3	Cataract, lamellar	5
Strumous keratitis	5	„ congenital	6
Superficial keratitis	2	„ senile	28
Ulcerative keratitis	24	„ secondary	1
Abscess in cornea	2	„ traumatic	11
Staphyloma corneæ	3	Membrane after extraction	7
Corneal nebulæ	2	Dislocation of lens	1
Adherent leucoma	2	Shrunken globe	2
Corneal wound	10	Intra-ocular growth	2
Corneal abrasion	1	High myopia	2
Rupture of cornea	5	Strabismus, convergent	2
Burn of cornea	1	„ divergent	1
Wound of sclera	1	Blepharophimosis and epicanthus	1
Episcleritis	2	Entropion	7
Iritis	9	Ectropion	2
Sympathetic iritis	1	Lagophthalmos	1
Irido-dialysis	1	Congenital ptosis	1
Congenital displacement of pupils		Lachrymal abscess	3
and lenses	1	Cellulitis of orbit	1
Irido-cyclitis	1	Caries of orbit	1
Choroido-retinitis	1	Growths in and about orbit	4
Optic neuritis	1	Suppurative panophthalmitis	3
Optic atrophy	1		
Retinitis proliferans	1		
			189

Table of Operations.

Extraction of hard cataract	25	Paracentesis of anterior chamber	5
Operations for treatment of 26 soft cataracts	39	Saemisch's section of cornea	2
Extraction, as for hard, of traumatic	1	Removal of foreign body from anterior chamber	1
Needling of congenital	18	Scleropuncture	2
„ of traumatic	5	Evisceration	1
Curette evacuation of congenital	7	Excision	30
Curette evacuation of traumatic	8	For disease	18
Discission of membrane after extraction of senile	15	For injury	12
Needling of lens in myopia	6	Canthoplasty	3
Iridectomy	44	For ectropion	2
For acute and subacute glaucoma	5	For entropion	10
For chronic glaucoma	5	For restoration of lid	1
For secondary glaucoma	10	For uniting lids	1
Preliminary to extraction	7	For congenital ptosis	1
For prolapsed iris	11	Tenotomy of internal rectus	10
For artificial pupil	3	„ of external rectus	3
For adherent leucoma	3	Advancement of internal rectus	1
Division of anterior synechia	2	„ of external rectus	1
Ablation of corneal vessels	1	For depressed scar	1
Cautery to cornea	4	For epicanthus	2
Scouring of cornea	2	Exploration of lachrymal sac	2
Tattooing of corneal nebula	3	Extirpation of lachrymal sac	1
		Exploration of orbit	4
		Removal of growths in and about orbit	4
			—
			229

TABLE I.—*Extractions of Hard Cataract.*—

Page in Bk. '97.	Report No.	Name and date.	Sex.	Age.	Anæsthetic.	Operation.
1	1	J. D. Jan. 7th	M.	62	Cocain	Left; extraction up with iridectomy; peripheral incision; fair conjunctival flap, chiefly at inner end. Good-sized iridectomy upwards. Lens came away easily and cleanly, leaving very little soft matter behind. Pupil left quite black
30	2	J. B. March 11th	M.	68	„	Left; extraction up with iridectomy; peripheral incision; small conjunctival flap. Iridectomy upwards; very little hæmorrhage. Lens delivered easily and cleanly
37	3	A. H. April 1st	F.	67	„	Right; extraction up with iridectomy; peripheral incision; very small conjunctival flap. Lens came away easily, and was fairly complete
38	4	S. J. April 1st	F.	67	„	Right; extraction up with iridectomy; incision at upper sclero-corneal junction. Lens came away easily, but was rather soft and sticky. A little opaque cortex removed afterwards
39	5	L. B. April 1st	F.	56	„	Left; extraction up with iridectomy; counter-puncture rather too peripheral; incision rather irregular at central part. Small conjunctival flap, chiefly at ends of incision. A good deal of soft cortical matter removed after the nucleus came away
41	6	J. H. April 8th	M.	65	„	Left; extraction up with iridectomy; peripheral incision; small conjunctival flap. Lens did not present at first, and cystitome was re-introduced, when lens came away easily and fairly clean, leaving pupil almost black
48	7	H. B. April 22nd	F.	60	„	Right; extraction up with iridectomy; incision at sclero-corneal junction; conjunctival flap only at ends; a rather ragged iridectomy in consequence of prolapse of iris. Lens difficult to extrude, and after delivery of the nucleus a good deal of soft cortex was left, some of which was subsequently removed
49	8	J. S. April 29th	M.	68	„	Left; extraction up with iridectomy; good conjunctival flap over whole length of incision. Lens nucleus came away easily, and a good deal of soft matter was afterwards expressed. Patient very unsteady

Mr. Lawford's Cases (19).

Progress of case.	Secondary operation.	Result.
Satisfactory, except for the fact that anterior chamber did not re-form fully till 4th day, and that some striped keratitis occurred. Jan. 30th.—Patient discharged for misbehaviour	—	Jan. 30th, 1897— + 10·0 Ds. = $\frac{5}{36}$.
Anterior chamber did not re-form till 4th day. Iritis set in a few days later, and lasted about 4 weeks. Patient suffered from gout	—	May 6th, 1897— + 9·0 Ds. = $\frac{6}{36}$. + 9·0 Ds. = $\frac{6}{24}$ 1 L. + 1·5 D.cyl. axis vert. + 14·0 Ds. + 1·5 D.cyl. = J. 12.
Satisfactory. Some striped keratitis and a little extravasation into pupil. Thin membrane left in pupil with a fair-sized gap up and out	—	June 1st, 1897— + 12·0 Ds. = $\frac{6}{9}$ fully, $\frac{6}{8}$ partly. + 16·0 Ds. = J. 1.
Satisfactory. Some striped keratitis. Pupil did not dilate very well to atropine. A good deal of flocculent matter remained in pupil	Sept. 30th, 1897— Cocain. Needling of right, one needle; good gap made	Oct. 5th, 1897— + 12·0 Ds. = $\frac{6}{12}$ 3 L. + 16·0 Ds. = J. 1 slowly, J. 6 easily.
Satisfactory. Leaking through wound and some striped keratitis at first. A good deal of opaque matter left in pupil	July 22nd, 1897— Cocain. Needling of left, one needle; small central gap made	July 27th, 1897— + 13·0 Ds. = $\frac{6}{9}$. + 18·0 Ds. = J. 1.
Satisfactory, except that at first tension remained low. A thin membrane left in pupil	—	May 4th, 1897— + 8·0 Ds. = $\frac{6}{24}$ 2 L. + 13·0 Ds. = J. 10.
Slight bulging of outer end of wound and rather low tension for the first 14 days; striped keratitis. Pupil occupied by irregular dense membrane	Sept. 16th, 1897— Cocain. Needling of right, one needle; a large clear gap made	Sept. 24th, 1897— + 14·0 Ds. = $\frac{6}{18}$. + 18·0 Ds. = J. 8.
Satisfactory. Some striped keratitis	—	May 18th, 1897— + 12·0 Ds. = $\frac{6}{60}$. + 18·0 Ds. = J. 8 slowly.

Page in Bk. '97.	Report No.	Name and date.	Sex.	Age.	Anæsthetic.	Operation.
13	9	E. McN. April 29th	F.	67	Cocain	Right. (Preliminary iridectomy Feb. 4th, 1897.) Extraction up; fairly wide peripheral incision, with conjunctival flap, chiefly at its ends. Lens came away fairly easily, some soft matter being left in pupil
56	10	E. W. May 20th	M.	69	„	Left. (Preliminary iridectomy April 18th, 1895.) Extraction up; fairly wide peripheral incision; good conjunctival flap. On evacuation of aqueous the cornea became collapsed and wrinkled. Lens came away easily; some hæmorrhage into anterior chamber. (Patient very feeble, the subject of senile pulmonary tuberculosis)
58	11	J. D. May 20th	M.	80	„	Left; extraction up with iridectomy; peripheral incision; fair conjunctival flap. A rather irregular iridectomy owing to a sudden movement of the patient. Lens came away easily. Considerable hæmorrhage into anterior chamber
59	12	E. C. May 20th	F.	62	Cocain, followed by ether and chloroform	Left; extraction up with iridectomy; wide peripheral incision; good conjunctival flap. Directly the knife was withdrawn a small amount of vitreous followed it. On tearing open the lens capsule the lens was displaced backwards, and a little more vitreous escaped. Patient had become so restless that ether and then chloroform were administered. When anæsthesia was complete the operation was resumed, and the lens removed easily by pressure without further loss of vitreous
62	13	S. B. May 27th	F.	64	Cocain	Right; extraction up with iridectomy; wide peripheral incision; small conjunctival flap. Lens came away easily and almost entire. Some hæmorrhage into anterior chamber
71	14	E. B. July 8th	F.	61	„	Right; extraction up with iridectomy; fairly wide peripheral incision; scarcely any conjunctival flap. Lens came away easily, leaving a good deal of flocculent matter in anterior chamber, most of which was afterwards expressed. (Left; successful cataract extraction Nov. 5th, 1896)

Progress of case.	Secondary operation.	Result.
Satisfactory for the first week, at the end of which period the eye received a slight knock; the wound reopened, aqueous escaped, and slight hæmorrhage into anterior chamber occurred. Anterior chamber reformed the same day, and the further progress was favorable	—	Feb. 15th, 1898— + 7·0 Ds. = $\frac{6}{36}$ 1 L. + 12·0 Ds. = J. 2 fairly. (Patient has not been wearing her distant glasses at all.)
Satisfactory. Some striped keratitis. Lower part of pupil blocked by opaque matter	Sept. 16th, 1897— Cocain. Needling of left, one needle; a narrow clear gap made in central part	Sept. 24th, 1897— + 11·0 Ds. + 1·5 Dcyl. = $\frac{6}{24}$ 2 L., ax. vertical. + 16·0 Ds. = J. 14. + 1·5 Dcyl.
Some restlessness and nocturnal delirium on 2nd and 3rd nights. Progress otherwise satisfactory, except for the occurrence of striped keratitis. Lower part of pupil not quite clear	Sept. 9th, 1897— Cocain. Needling of left, one needle; a large clear gap made	Sept. 17th, 1897— + 11·0 Ds. = $\frac{6}{12}$ (3). + 14·0 Ds. = J. 2 slowly.
Wound did not unite firmly till 18th day, and a good deal of congestion persisted; progress in other respects satisfactory. Pupil left almost completely blocked by opaque membrane	Oct. 7th, 1897— Cocain. Needling of left, one needle; a good gap made	April 5th, 1898— L. + 11·0 Ds. + 2·0 Dcyl. = $\frac{6}{12}$ 3 L., axis horizontal. + 16·0 Ds. = J. 1. + 2·0 Dcyl.
On 2nd day the eye became inflamed and iritis developed, the pupil dilating very badly to atropine. When patient left ward, a month after operation, the cornea and iris were bright and the eye was not tender, but tension remained rather low	—	Sept. 30th, 1897— + 12·0 Ds. = $\frac{6}{18}$ partly. + 16·0 Ds. = J. 14.
Atropine irritation followed by mucopurulent conjunctivitis. Inflammatory exudation in pupil, which was infected and became yellow and purulent. July 15.—Incision reopened, the pus removed, and the anterior chamber irrigated with chlorine water. No further suppuration occurred, but eye did not quiet down for 2 months. In Oct. the tension rose, and an iridectomy was done; tension and pain were relieved, and although healing was delayed by mydriatic irritation (hyoscine), the eye finally became quiet. Cornea opaque in centre, but transparent at periphery, allowing view of a large clear coloboma	—	—

Page in Bk. '97.	Report No.	Name and date.	Sex.	Age.	Anæsthetic.	Operation.
23	15	S. W. Sept. 16th	F.	65	Cocain	Left. (Preliminary iridectomy Feb. 25th, 1897.) Extraction up; peripheral incision (first knife too blunt, so a second was introduced through same puncture and section completed); fair conjunctival flap. Lens came away easily, leaving but little soft matter to be expressed
106	16	J. D. Oct. 7th	M.	75	Cocain followed by chloroform	Right. Senile cataract in old glaucomatous eye, for which iridectomy upwards had been done Sept. 12th, 1896. Operation begun under cocain. Incision at sclero-corneal junction upwards, not long enough and rather irregular. Patient very restless. Operation stopped and chloroform administered. Attempt to extrude lens resulted in loss of vitreous. Scoop introduced, but lens could not be removed. A considerable quantity of clear vitreous escaped. Protruding vitreous cut off and eye tied up
117	17	S. K. Oct. 28th	F.	75	Cocain	Left; extraction up with iridectomy; incision fairly peripheral; good conjunctival flap. Iridectomy not clean, and pupillary border left; but it gave way during extrusion of lens. Lens came away easily, and a good deal of soft matter was afterwards removed
122	18	R. C. Nov. 11th	M.	52	„	Left; extraction up with iridectomy; peripheral incision. Lens very loosely held by its ligament, and at first rather resistant to expression, but finally came away well, leaving very little membrane in pupil. (Right extraction Sept., 1892, Cardiff. Needled here May, 1896. Vision good)
129	19	H. W. Dec. 2nd	M.	76	„	Right; extraction up with iridectomy; peripheral incision; conjunctiva very thin and rotten. Lens delivered fairly easily by expression, very little soft matter being left

Progress of case.	Secondary operation.	Result.
Satisfactory but slow. Some striped keratitis. Eye remained red and liable to flush rather longer than usual. Pupil nearly completely blocked by membrane. Will require needling	—	April 15th, 1898— + 10·0 Ds. = $\frac{6}{18} \cdot \frac{6}{12}$ (1). + 14·0 Ds. = J. 1.
Anterior chamber remained very shallow; tension low; cornea stripy and globe tender. Later, tension improved and tenderness disappeared, but the iris remained almost completely in apposition to cornea. Pupil occupied by membrane	—	—
Satisfactory	Jan. 13th, 1898— Cocain. Needling of left, one needle; a large clear gap left	Jan. 20th, 1898— + 11·0 Ds. + 2·0 Dcyl. = $\frac{6}{24}$, axis horizontal. + 15·0 Ds. + 2·0 Dcyl. = J. 8.
A large hæmorrhage into anterior chamber on 4th day (without any discoverable cause, such as a knock). This, however, was very rapidly absorbed, and further progress was satisfactory	—	Apparently some firm vitreous haze. Fundus easily seen, and looks healthy. Dec. 3rd, 1897— L. + 10·0 Ds. = $\frac{6}{12} \cdot \frac{6}{9}$ 2 L. + 15·0 Ds. = J. 1.
As patient had shown signs of wandering and delirium on the preceding night, morphia was injected the night after the operation. Next day he was so restless that he was allowed up. This restlessness increased; sleep could only be obtained by morphia or bromide; patient began to have delusions, and gradually his condition became one of senile dementia. Healing of incision was protracted by patient's restlessness; quiet iritis, low tension, and much striped corneal haze persisted for some weeks. The cerebral symptoms developed before the use of atropine was commenced	—	Patient not seen again.

Mr. Fisher's

Page in Bk. '97.	Report No.	Name and date.	Sex.	Age.	Anæsthetic.	Operation.
5	20	W. C. March 10th	M.	65	Cocain	Right; extraction up with iridectomy; peripheral incision up and slightly in; good conjunctival flap; a rather ragged iridectomy owing to a movement on the part of the patient. Lens delivered with difficulty after somewhat prolonged pressure
6	21	S. C. March 10th	F.	66	„	Left; extraction up with iridectomy; peripheral incision; small conjunctival flap, chiefly at inner end. Lens came away easily with a good deal of soft flocculent matter
28	22	T. W. Aug. 5th	M.	60	„	Right; extraction up with iridectomy; incision not quite peripheral at inner end; good conjunctival flap. On using the cystitome some vitreous presented in wound, but lens was delivered almost entire, without any loss of vitreous, a little flocculent matter being left in pupil
35	23	R. B. Aug. 19th	F.	69	„	Right; extraction up with iridectomy; peripheral incision. Iris fell over knife, and a suitable coloboma was made in completing the section. Lens came away easily and cleanly. While the toilette of the eye was being finished, patient suddenly squeezed her lids, and a large quantity of vitreous escaped
42	24	E. C. Oct. 20th	F.	54	„	Left; extraction up with iridectomy; peripheral incision. Lens could not be expressed, and vitreous presented, but none was lost. Scoop was inserted and lens removed at first attempt without any escape of vitreous. (Right extraction June, 1896. Vision of right with correction = $\frac{6}{12}$ and J. 1)
46	25	S. R. Nov. 15th	F.	80	Chloroform	Left; extraction up with iridectomy (a sneezing fit came on during the section, which drove the iris into the wound, but otherwise did no harm); fair-sized iridectomy. Lens freely moveable, but easily delivered by pressure; vitreous presented, but none was lost

Cases (6).

Progress of case.	Secondary operation.	Result.
Satisfactory. Some striped haze of cornea and a little blood extravasation on front of iris. A thin membrane slightly speckled with denser opacities and pigment in pupil	May 5th, 1897— Cocain. Needling of right, one needle; fair central gap made	May 10th, 1897— $\frac{+ 10.5 \text{ Ds.}}{+ 1.0 \text{ Dc.}} = \frac{6}{18} 3 \text{ L.},$ axis horizontal. $\frac{+ 16.0 \text{ Ds.}}{+ 1.0 \text{ Dc.}} = \text{J. 2.}$
Iritis supervened, pupil scarcely dilating to atropine, and becoming almost entirely blocked by membrane	—	April 29th, 1897— $+ 15.0 \text{ Ds.} = \text{J. 16.}$ Unfinished.
Satisfactory. Very little reaction of any kind. Lower part of pupil occupied by membrane, upper part clear	—	Oct. 18th, 1897— $\frac{+ 9.0 \text{ Ds.}}{+ 2.0 \text{ Dc.}} = \frac{6}{12},$ axis horizontal. $\frac{+ 15.0 \text{ Ds.}}{+ 2.0 \text{ Dc.}} = \text{J. 2; J. 1 slowly}$ Still a little filmy membrane in pupil.
Vitreous remained protruding in wound 14 days, and tension remained low, but gradually rose to normal. Pupil occupied by thin membrane	—	Dec. 2nd, 1897— $\frac{+ 10.0 \text{ Ds.}}{+ 3.0 \text{ Dc.}} = \frac{6}{18} \cdot \frac{6}{12} 2 \text{ L.},$ axis horizontal. $\frac{+ 15.0 \text{ Ds.}}{+ 3.0 \text{ Dc.}} = \text{J. 1.}$
Some striped haze of cornea at first. Iritis set in, but soon gave way to treatment, only to recur 3 weeks after she left the ward, necessitating her readmission, when the eye soon became quiet again. Pupil occupied by dense membrane	Feb. 2nd, 1898— Cocain. Needling of left with a cutting needle; good gap made below	Feb. 6th, 1898— $\frac{+ 12.0 \text{ Ds.}}{+ 2.0 \text{ Dc.}} = \frac{6}{18},$ axis horizontal. $\frac{+ 16.0 \text{ Ds.}}{+ 2.0 \text{ Dc.}} = \text{J. 4; J. 1 slowly.}$
Anterior chamber did not re-form till the 5th day, leakage through the wound going on. Eye remained red and liable to flush for some weeks; one pillar of coloboma entangled in scar of incision	Dec. 27th, 1897— Chloroform. Attempt, attended with only partial success, to free the adhesion of iris; the membrane remaining in pupil was then torn with one needle, a good gap being made	Jan. 12th, 1898— $\frac{+ 8.0 \text{ Ds.}}{+ 3.0 \text{ Dc.}} = \frac{6}{24},$ axis up and out. $\frac{+ 12.0 \text{ Ds.}}{+ 3.0 \text{ Dc.}} = \text{J. 10.}$

TABLE II.—*Soft Cataracts.*—

Page in Bk. '97.	Report No.	Name and date.	Sex.	Age.	Anæsthetic.	Operation.
7	26	G. S. Jan. 14th	M.	35	Cocain	Left; traumatic cataract (result of a blow received in 1892); incision almost entirely corneal, just internal to sclerotic margin; patient very unsteady; iris prolapsed into wound. Cystitome introduced with some difficulty and capsule torn. Lens found to be soft and flocculent, but the greater part of it was evacuated by pressure. As soon as lens was removed iris detached itself from corneal incision
4	27	H. H. Feb. 11th	M.	7	Ether	Right; traumatic cataract (result of perforating wound of cornea by an umbrella wire). Curette evacuation after needling on Jan. 21st; incision at outer side of cornea; a large amount of soft matter easily evacuated with the curette; no hæmorrhage from iris
19	28	E. G. Feb. 18th	F.	23	Cocain	Posterior polar cataracts. Left; first needling; on withdrawing needle most of the aqueous escaped, and some lens matter came forward into anterior chamber. March 4th—Curette evacuation; lens matter broken up with the cystitome, and though very sticky a fair quantity was removed by curette and pressure
22	29	C. C. March 4th	M.	14	Ether	Right; traumatic cataract (result of a perforating corneal wound). Curette evacuation; incision up and out; capsule torn with cystitome; a small amount of lens matter removed with curette. An attempt made to divide an anterior synechia, but with only partial success
31	30	N. W. March 11th	M.	9	Cocain	Congenital cataracts. Right; first needling, followed by curette evacuation on March 18th; incision up and out; a fair amount of lens matter evacuated
46	31	F. T. April 29th	F.	2 $\frac{1}{12}$	Ether	Left; traumatic cataract (result of perforating corneal wound); incision with keratome at upper periphery of cornea; fairly wide iridectomy (iris being adherent to corneal scar); lens capsule torn with cystitome, and a very small quantity of lens matter evacuated with the curette

Mr. Lawford's Cases (17).

Progress of case.	Secondary operation.	Result.
Next day iris was found to have prolapsed into wound. Under cocain a wide iridectomy was done upwards through the original incision; the inner pillar of the coloboma seemed well away from wound, but the outer one was immediately behind the outer end of wound. Further progress favorable, and patient left ward on 20th day after operation. Tension normal; no congestion; thin membrane in pupil Favorable. A good deal of opaque matter still remains in pupil	—	March 25th, 1897— + 12·0 Ds. = $\frac{6}{9}$. + 16·0 Ds. = J. 6. + 20·0 Ds. = J. 1.
Some ciliary congestion at first, but the eye soon became quiet. By April 29th the lens matter was almost entirely absorbed	—	—
The anterior synechia remained as before. Some congestion at first	April 1st, 1897— Ether. Division of anterior synechia with Lang's knife, entered through outer part of cornea; slight hæmorrhage from iris	—
Eye remained congested and tension low for 14 days. Posterior synechia at outer side	—	—
Lens matter swelled up rapidly; iris formed a fresh adhesion to corneal wound	May 13th, 1897— Ether. Incision with keratome above; anterior synechia freed with sharp hook; a fair amount of lens matter removed by curette and expression. Later a fresh adhesion of iris formed; a good deal of opaque matter remains in pupil	—

Page in Bk. '97.	Report No.	Name and date.	Sex.	Age.	Anæsthetic.	Operation.
60	32	G. L. H. May 20th	F.	1 $\frac{10}{12}$	Chloroform	Congenital cataracts. Right; first needling; lens freely torn with one needle; opaque portion very tough and resistant
60	33	G. L. H. June 17th	F.	1 $\frac{10}{12}$	„	Congenital cataracts (cf. <i>supra</i> , No. 32). Left; first needling, one needle
93	34	C. E. T. Aug. 30th	M.	14	Cocain	Left; traumatic cataract (result of an injury to eye from a branch of a tree). Curette evacuation; incision with keratome, a little internal to margin of cornea at outer side; a large amount of lens matter came away easily; slight hæmorrhage from iris
96	35	J. S. Sept. 9th	M.	16	„	Left; traumatic cataract (result of a blow). Lens freely needled with one needle; capsule tough. Oct. 7th—Curette evacuation; incision down and out; greater part of lens matter removed without difficulty
97	36	M. H. Sept. 9th	F.	7	Ether	Congenital cataracts. (Left needled 4 times in 1891; curette evacuation Dec., 1891.) Left; fifth needling; membrane torn with two needles; it was very tough and tore with difficulty, pulling on iris considerably
97	37	M. H. Sept. 16th	F.	7	„	Congenital cataracts (cf. <i>supra</i> , No. 36). Right needled 3 times in 1891. Right membrane freely torn with two needles
31	38	N. W. Sept. 30th	M.	9	Cocain	Congenital cataracts (cf. <i>supra</i> , No. 30). Left; first needling (one needle), followed by curette evacuation on Oct. 14th. Incision down and out; a good deal of swollen lens matter evacuated
109	39	D. T. Oct. 14th	F.	16	„	Lamellar cataracts. (Eyes first operated on at Southsea when 9 years old. Eleven operations altogether. Right needling and evacuation, and left needling in 1895 at St. Thomas's.) Right needling, one needle
128	40	M. R. Nov. 25th	F.	23	„	Lamellar cataracts. (First needling of each in 1886; 2nd needling of left in 1890.) Right; 2nd needling, one needle
130	41	W. R. Dec. 2nd	M.	10	„	Congenital cataracts. (Left needled 3 times in 1891; right needled 3 times and left once in 1896.) Fourth needling of right, one needle; good clear gap, fairly central, made

Progress of case.	Secondary operation.	Result.
Favorable	May 27th, 1897— Chloroform. Second needling of right, one needle; a large central gap formed	—
Favorable. A good central gap	—	—
Satisfactory	—	Oct. 12th, 1897—Left quiet; tension normal; pupil circular and wide; some lens capsule still in pupil.
Satisfactory. Posterior synechia above; much opaque matter still remaining in pupil	—	—
Favorable. No reaction whatever on part of iris	—	Good clear gap in outer part of pupil. Can distinguish size and shape of small objects, such as coins. Mental condi- tion at present prevents more accurate testing of vision.
Favorable	—	Good central gap.
Pupil did not dilate well, and tension remained lower than that of right for some time	—	—
Favorable. A good gap in membrane	—	Oct. 18th, 1897— + 10·0 Ds. = $\frac{6}{36}$. + 14·0 Ds. = J. 12.
Favorable	—	Dec. 7th, 1897— + 8·0 Ds. = $\frac{6}{12}$ 3 L. + 12·0 Ds. = J. 1.
Favorable	—	Dec. 7th, 1897— + 10·0 Ds. = $\frac{6}{18}$ partly. + 14·0 Ds. = J. 10.

Page in Bk. '97.	Report No.	Name and date.	Sex.	Age.	Anæsthetic.	Operation.
115	42	C. W. Oct. 28th	M.	7	Cocain	Lamellar cataracts. Left; curette evacuation after needling on Oct. 21st. Incision down and out with keratome; some lens matter removed, but only after some difficulty, it being very sticky and not escaping readily
<i>Mr. Fisher's</i>						
7	43	S. A. W. March 17th	M.	7	Ether	Lamellar cataracts. Right; curette evacuation after needling on March 10th. Incision at outer side; lens matter removed in large quantity, but only after some difficulty; no hæmorrhage from iris
12	44	J. P. April 29th	F.	44	Cocain	Right; traumatic cataract (result of injury by a fish-bone when aged 5 years). Torn with a cutting needle; small gap made
7	45	S. A. W. May 26th	M.	7	Ether	Lamellar cataracts (cf. <i>supra</i> , No. 43). Left; curette evacuation after needling on May 19th. Incision with keratome on outer side; fair amount of lens matter coaxed out with curette and spatula; a little hæmorrhage from iris
14	46	A. C. May 28th	M.	21	Cocain	Left; traumatic cataract (injury by a screwdriver 3 months before admission). Curette evacuation 11 hours after needling; incision at outer side; very little of the swollen lens matter evacuated
26	47	G. H. Aug. 3rd	M.	15	„	Lamellar cataracts. (Needling of left, followed by 2 curette evacuations in 1894; right needling and curette evacuation in 1895.) Second needling of each lens. In right a good central gap made; in left the gap was below centre of pupil
36	48	A. L. Aug. 19th	M.	11	„	Right; traumatic cataract (result of a blow from a tip-cat). First needling, one needle used
43	49	D. H. Nov. 17th	M.	8	Ether	Left; traumatic cataract (result of a perforating wound of cornea). Curette evacuation (a previous needling being unnecessary); incision outwards; lens matter very sticky, and only a little could be removed

Progress of case.	Secondary operation.	Result.
Pupil did not react well to atropine, iris became adherent to scar of incision, and a quiet iritis developed, tension becoming very low. On Dec. 2nd an attempt was made to free the iris, but it was so rotten that it broke away under the forceps; a cystitome was introduced and the lens matter broken up, when a little vitreous escaped. No improvement took place, but the iritis advanced, and tension became lower and lower	—	Jan. 6th, 1898— Excision.

Cases (7).

Favorable. Anterior synechia	May 12th, 1897— Ether. Right; attempt made to	July 18th, 1898— R. + 9.0 Ds. = $\frac{6}{24}$.
Favorable	—	May 4th, 1897— + 10.0 Ds., sees board but no letters. + 15.0 Ds. = J. 18. Still much opaque matter in pupil.
Satisfactory. A good deal of soft matter still in pupil	—	July 18th, 1898— L. + 9.0 Ds. = $\frac{6}{60}$.
Eye remained congested for the first fortnight, but afterwards progress was satisfactory, and lens matter underwent rapid absorption	—	July 21st, 1897— + 11.0 Ds. = $\frac{6}{12}$. + 11.0 Ds. = $\frac{6}{9}$, + 1.0 Dc. = $\frac{6}{9}$, axis horizontal. + 16.0 Ds. = J. 1 slowly.
Satisfactory	—	Aug. 5th, 1897— R. + 12.0 Ds. = $\frac{6}{9}$ partly, + 1.5 Dc. = $\frac{6}{9}$ partly, axis vertical. L. + 12.0 Ds. = $\frac{6}{9}$ partly, + 1.0 Dc. = $\frac{6}{9}$ partly, axis vertical. Together = $\frac{6}{9}$ partly. With + 16 Ds. and the cylinders = J. 1 slowly with each.
Favorable. A good deal of opaque matter still in pupil	May 11th, 1898— Cocain. Right needling	May 18th, 1898— + 11.0 Ds. = $\frac{6}{9}$ partly. + 15.0 Ds. = J. 1.
Favorable. Pupil still occupied by opaque matter	—	—

Analysis of Cataract Operations.

I. Extraction of hard cataract—25 cases. Mr. Lawford, Nos. 1 to 19. Mr. Fisher, Nos. 20 to 25.

In all the cases a spring speculum and fixation forceps were used, and the section was made upwards along the sclero-corneal junction with a Graefe knife.

Iridectomy was performed in all the cases; at the time of the operation in all except Nos. 9, 10, 15, and 16, in which the iridectomy had been done as a preliminary operation. In No. 16, a case of cataract in a glaucomatous eye, the iridectomy had been performed to relieve the glaucoma.

In all cases atropine was used to the eye as a routine on the third morning after the operation if the anterior chamber had been restored.

In No. 23 the iris fell over the knife, and iridectomy was done in completing the section, further division of the iris being unnecessary. In Nos. 7 and 25 prolapse of iris occurred, in the first case as soon as the section was completed, in the second as a result of a sneezing fit during the section; in each case a satisfactory iridectomy was subsequently performed. An unusually large amount of hæmorrhage into the anterior chamber occurred in No. 11.

In Nos. 12, 16, and 18 the lens moved under the cystitome, in the third case being only tilted, but in the other two escaping backwards into the vitreous. In No. 12 it was possible to deliver the lens by expression; in No. 16 an attempt was made to remove the displaced lens with the scoop, but the greater part of the nucleus had to be left on account of escape of vitreous. The scoop was also used in No. 24, in which case the lens was removed at the first attempt.

Vitreous escaped in Nos. 12, 16, and 23, and presented without escaping in Nos. 22, 24, and 25. In No. 12 a bead of vitreous followed the knife when withdrawn after the section; a little more was lost on using the cystitome, when the lens dropped back into the vitreous. From this position, however

(after administration of an anæsthetic), it was removed by expression without further loss. In No. 16, a case of cataract in a glaucomatous eye, vitreous escaped on pressure being applied to extrude the lens, and a further escape occurred on the introduction of the scoop. In No. 23 the operation was almost completed when a sudden movement on the part of the patient forcibly expelled a jet of vitreous.

Chloroform was employed as a general anæsthetic in No. 25, on account of advanced age and complete deafness; in all the other cases cocain was used, though in Nos. 12 and 16 general had to be substituted for local anæsthesia in the course of the operation, owing to the want of control shown by the patients, ether followed by chloroform being employed in the first case, chloroform alone in the second. The cocain was used as a 2 per cent. solution, freshly prepared and sterilised, and was dropped into the conjunctival sac previous to operation.

II. Operations for treatment of soft cataract—24 cases. Mr. Lawford, Nos. 26 to 42. Mr. Fisher, Nos. 43 to 49.

In No. 26 extraction was performed as for hard cataract, but without iridectomy; the iris, however, prolapsed into the wound, and iridectomy was performed next day; in other respects the case did well, practically full vision being obtained.

There were fifteen curette evacuations, seven for congenital, eight for traumatic cataracts. The incision was made with a keratome in the periphery of the cornea in all cases. A previous needling was unnecessary in three of these cases, in the others the evacuation followed one or more needlings.

In No. 46, a case of traumatic cataract in a man aged twenty-one, the lens matter swelled up so rapidly that its evacuation was necessary eleven hours after the needling.

The remaining operations, 23 in number, were needlings, 18 being for congenital and 5 for traumatic cataracts.

In addition, one case of lamellar cataract in an adult (not included in the table of cataracts) was treated by iridectomy for artificial pupil, good vision resulting.

In the majority of cases a 2 per cent. solution of cocain was used as a local anæsthetic in the same way as for extrac-

tion of senile cataracts, but a general anæsthetic was employed in Nos. 27, 29, 31, 32, 33, 36, 37, 43, 45, and 49 (chloroform being administered in Nos. 32 and 33, ether in the rest), all children whose self-control under operation could not be depended on.

R E P O R T
OF THE
DEPARTMENT FOR DISEASES OF THE SKIN,
1897.

By A. EDWARD STEVENS, M.B.DURH., L.R.C.P., M.R.C.S.

TABLE I.—Statistical

DISEASES.	Jan.		Feb.		March		April.	
	M.	F.	M.	F.	M.	F.	M.	F.
CLASS I.—HYPERÆMIA.								
Erythema	1	1	3	...	...	3	3
„ post-vaccinal	1	...	...	...	...
CLASS II.—EXUDATIONES.								
Urticaria	1	...	3	1	...	1	...	...
Eczema	17	7	5	6	6	16	6	13
Furunculosis
Impetigo contagiosa	2	3	1	...	1	2	1	1
Herpes simplex	1	...	...	...	...
„ zoster	1	1	...	...	...	...	...	...
Psoriasis	4	4	5	3	2	...	2	3
Pemphigus
Lichen planus
„ pilaris	1	...	...	...	...	1	...	...
Dermatitis
„ exfoliativa
„ herpetiformis
Pityriasis rosea
CLASS III.—HÆMORRHAGIÆ.								
Purpura simplex
„ rheumatica
CLASS IV.—HYPERTROPHIÆ.								
Verruca
Ichthyosis
Tylosis palmaris
Morphœa
Sclerodermia
Multiple angiœmata (angeio-keratoma)
CLASS V.—ATROPHIÆ.								
Leucomelanodermia
CLASS VI.—NEOPLASMATA.								
Lupus vulgaris	2	...	...	7	1	...	...
Syphilis, primary	1	...	...	...	...	...
„ secondary	1	1	...	...	2	...	...
„ tertiary	1	3	1	1	...	...	2
„ congenital

TABLE I.—

DISEASES.	Jan.		Feb.		March.		April.	
	M.	F.	M.	F.	M.	F.	M.	F.
CLASS VII.—NEUROSES.								
Pruritus	1	...	1	...	...	...	1	...
Incipient Raynaud's disease . . . . .	...	1	...	...	...	...	...	...
CLASS VIII.—MORBI APPENDICUM.								
<i>Sebaceous glands.</i>								
Seborrhœa sicca	2	1	...	...	6	...	...	2
„ oleosa . . . . .	...	...	...	...	...	1	...	...
Acne vulgaris . . . . .	...	1	1	...	...	...	2	2
„ indurata . . . . .	...	...	1	...	...	...	...	...
„ rosacea . . . . .	...	1	...	3	...	1	...	2
<i>Hair-follicles.</i>								
Alopecia areata	4	...	2	3	3	3	2	4
„ universale . . . . .	...	...	...	...	...	...	...	...
Sycosis . . . . .	...	...	...	...	1	...	...	...
Folliculitis . . . . .	...	...	...	...	1	...	...	...
Comedones . . . . .	...	...	...	...	1	...	...	...
<i>Nails.</i>								
Eczema . . . . .	...	...	...	...	1	...	...	...
Atrophy . . . . .	...	...	...	...	...	...	...	...
<i>Sweat-glands.</i>								
Hyperhydrosis . . . . .	...	...	...	...	...	...	...	...
CLASS IX.—PARASITICÆ.								
A. <i>Vegetable.</i>								
Tinea circinata	3	...	...	...	1	...	1	...
„ tonsurans	7	1	2	1	5	1	4	6
„ versicolor . . . . .	...	...	1	...	1	...	...	...
Favus . . . . .	...	...	...	...	...	...	...	...
B. <i>Animal.</i>								
Scabies	1	...	1	...	...	...	2	...
Pediculi	1	...	1	2	2	...	2	1
ADDENDA.								
Varicella . . . . .	...	...	...	...	...	...	...	...
Bromide rash . . . . .	...	...	...	...	...	...	1	...

continued.

May.		June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.		Totals.		Total.
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
...	1	...	...	2	...	...	...	...	...	...	...	...	...	...	...	5	1	6
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
...	3	1	1	1	...	...	2	...	1	...	...	3	...	3	...	16	10	26
...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	2	2
...	2	...	...	...	...	1	1	1	1	5	...	2	...	1	...	13	7	20
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7	7
3	4	4	3	1	3	3	1	3	5	4	2	1	2	2	...	32	30	62
...	1	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	3	3
1	...	...	...	1	...	1	...	1	...	...	...	...	...	...	...	5	...	5
...	2	...	1	...	...	...	...	...	...	...	...	...	...	1	...	1	1	2
...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	2	3	5
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	1
...
...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	1
1	1	1	...	...	1	1	...	2	...	2	...	1	...	2	1	15	3	18
...	1	1	...	...	...	2	1	2	2	2	1	1	1	3	6	29	21	50
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2
...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	1
4	...	...	...	1	3	...	...	5	...	4	...	5	2	2	...	25	5	30
...	1	3	...	1	...	2	...	1	3	...	2	1	...	3	1	17	10	27
...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	1
...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2
																381	311	692

TABLE II.—*Age in certain Diseases.*

		Under 1 year.	1-5.	5-10.	10-20.	20-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80-90.
Eczema	M.	8	13	7	17	18	16	10	5	4	6	—
	F.	8	7	8	14	9	14	12	12	9	3	—
	Total	16	20	15	31	27	30	22	17	13	9	—
Impetigo	M.	1	2	1	6	—	—	—	—	—	—	—
	F.	1	5	5	—	—	—	—	—	—	—	—
	Total	2	7	6	6	—	—	—	—	—	—	—
Psoriasis	M.	—	2	3	15	9	2	8	1	—	—	—
	F.	—	2	2	12	7	3	2	2	1	1	—
	Total	—	4	5	27	16	5	10	3	1	1	—
Alopecia areata	M.	—	1	1	17	3	8	1	3	—	—	—
	F.	—	2	6	8	8	4	2	1	—	—	—
	Total	—	3	7	25	11	12	3	4	—	—	—
Tinea tonsurans	M.	—	7	17	4	—	—	—	—	—	—	—
	F.	1	2	12	6	—	—	1	—	—	—	—
	Total	1	9	29	10	—	—	1	—	—	—	—
Tinea circinata	M.	1	6	2	5	—	1	—	—	—	—	—
	F.	—	—	1	1	1	—	—	—	—	—	—
	Total	1	6	3	6	1	1	—	—	—	—	—

STATISTICS

OF THE

THROAT DEPARTMENT OF ST. THOMAS'S HOSPITAL IN 1897.

BY H. BETHAM ROBINSON, M.S., F.R.C.S.,
SURGEON IN CHARGE OF THE DEPARTMENT.

THE following tables have been drawn up on the lines adopted during previous years. For assistance in their compilation I am indebted to Dr. Grant, my clinical assistant.

Total Number of New Cases treated in the Special Department for Diseases of the Throat during the year 1897.

		Number of patients.		
		Male.	Female.	Total.
A. Pharyngeal Affections	.	415	442	857
B. Laryngeal Affections	.	70	83	153
C. Affections of Nose and Accessory Cavities		20	35	55
D. Buccal and Œsophageal Affections	.	23	11	34
E. General and Miscellaneous Affections	.	38	72	110
F. Renewed Letters	.	45	56	101
Totals	.	611	699	1310

A. *Pharyngeal Affections.*

Disease.	Number of patients.		
	Male.	Female.	Total.
1. Acute and subacute pharyngitis	58	52	110
2. Chronic pharyngitis	3	3	6
3. Granular pharyngitis	12	15	27
4. Syphilitic ulceration and gummata	8	11	19
5. Retro-pharyngeal abscess	1	—	1
6. Carcinoma of pharynx	1	—	1
7. Cyst of tonsil	—	1	1
8. Acute and subacute tonsillitis	156	138	294
9. Chronic tonsillitis and hypertrophy of tonsils	55	73	128
10. Peritonsillitis	9	2	11
11. Peritonsillar abscess	6	3	9
12. Adenoid vegetations	41	54	95
13. Adenoid vegetations and hypertrophy of tonsils	65	90	155
Totals	415	442	857

B. *Laryngeal Affections.*

Disease.	Number of patients.		
	Male.	Female.	Total.
1. Acute and subacute laryngitis	34	33	67
2. Chronic laryngitis	12	12	24
3. Tuberculous laryngitis	6	4	10
4. Lupus of larynx	1	—	1
5. Syphilitic ulceration and gummata	4	7	11
6. Syphilitic stenosis	—	1	1
7. Injury to larynx	—	1	1
8. Œdema of larynx	2	2	4
9. Papillomata of larynx	1	—	1
10. Carcinoma of larynx	3	—	3
11. Laryngeal neurosis	—	1	1
12. Functional aphonia	—	20	20
13. Bilateral abductor paralysis	2	—	2
14. Right abductor paralysis	1	—	1
15. Left abductor paralysis	1	1	2
16. Complete paralysis of left cord	1	1	2
17. Tracheitis	2	—	2
Totals	70	83	153

c. *Affections of Nose and Accessory Cavities.*

Disease.	Number of patients.		
	Male.	Female.	Total.
1. Acute and subacute rhinitis	6	5	11
2. Hypertrophic rhinitis	6	16	22
3. Naso-pharyngeal catarrh	4	1	5
4. Ozæna	1	6	7
5. Syphilitic ulceration and gummata	—	1	1
6. Tuberculous destruction of septum	1	1	2
7. Deflected septum	—	2	2
8. Mucous polypi	2	2	4
9. Empyema of left antrum	—	1	1
Totals	20	35	55

d. *Buccal and Œsophageal Affections.*

Disease.	Number of patients.		
	Male.	Female.	Total.
1. Stomatitis	3	1	4
2. Hypertrophy of lingual tonsil	2	2	4
3. Hypertrophy of papillæ of tongue	1	—	1
4. Chronic superficial glossitis	1	—	1
5. Syphilitic ulceration and gummata of soft palate	6	4	10
6. Syphilitic adhesions of soft palate	—	1	1
7. Necrosis of hard palate	—	1	1
8. Epithelioma of tongue	1	—	1
9. Epithelioma of tonsil	2	—	2
10. Epithelioma of soft palate	1	—	1
11. Ranula	—	1	1
12. Malignant stricture of œsophagus	5	1	6
13. Functional stricture of œsophagus	1	—	1
Totals	23	11	34

E. General and Miscellaneous Affections, &c.

Disease.	Number of patients.		
	Male.	Female.	Total.
1. Diphtheria	1	—	1
2. Syphilis	5	8	13
3. Bronchitis	—	4	4
4. Aneurysm of lingual artery	1	—	1
5. Simple bronchocele	1	7	8
6. Exophthalmic goitre	—	4	4
7. Chronic adenitis of neck	6	5	11
8. Lymphadenoma of neck	1	—	1
9. Aural	4	4	8
10. Climacteric	—	2	2
11. Medical	9	26	35
12. Nil, trivial, &c.	10	12	22
Totals	38	72	110

The following Operations were performed in the Out-patients' room under Chloroform or A.C.E. Mixture administered by Dr. Low.

Disease.	Number of patients.		
	Male.	Female.	Total.
1. Removal of adenoids	21	22	43
2. Removal of adenoids and tonsils	73	71	144
3. Removal of both inferior turbinated bones	2	1	3
4. Removal of adenoids and aural polyp	1	—	1
Totals	97	94	191

REPORT
OF THE
EAR DEPARTMENT
FOR THE YEAR 1897.

By RICHARD LAKE, F.R.C.S.

DURING the year 1897 the number of new cases in this department was 670, or exactly the same as in the preceding one. Of these cases ten were for diseases of the nose. The rule of not inserting cases under two or more headings has been observed, as in previous reports of this department.

The number of cases of suppurative otitis media is, as usual, nearly half the total number. In the selection of cases for treatment the custom of giving letters to applicants with suppurative disease in preference to those without suppurative disease has been continued, since these yield the best results.

There were 151 operations performed in the out-patient room under a general anæsthetic during the year. The cases of incision of the membrane under nitrous oxide are not included.

	Males.	Females.	Total.
A. DISEASES OF THE EXTERNAL MEATUS.			
Cerumen	32	17	49
Eczema	5	3	8
Abscess of meatus	3	3	6
Foreign bodies	1	2	3
Inflammation of external meatus	3	1	4
Total	44	26	70
B. DISEASES OF THE MIDDLE EAR.			
Rupture of the membrana tympani	0	0	0
Acute median otitis:			
(a) Without perforation	3	4	7
(b) With perforation	21	16	37
Chronic median otitis	24	52	76
Do. suppurative	170	146	316
Otalgia	4	4	8
Cicatricial membrana tympani	4	4	8
Senile changes in membrane	3	3	6
Eustachian obstruction	47	51	98
Adenoids			
Mastoiditis	3	2	5
Total	279	282	561
C. DISEASES OF INTERNAL EAR.			
Syphilis	2	3	5
Degeneration of eighth nerve	10	4	14
Nerve tinnitus	0	0	0
Labyrinthine disease (concussion)	2	0	2
Deaf-mutism (acquired)	3	2	5
Menière's symptoms	2	1	3
Total	19	10	29
Grand total . . . . .	...	...	660

Table of Operations.

	Males.	Females.	Total.
Aural polypi	7	15	22
Adenoids and tonsils	56	70	126
Abscess of meatus	1	2	3
Total	64	87	151

NOTES.—Out of the cases of chronic suppuration ten gave more or less definite histories of trauma. The foreign bodies consisted of a plug of cotton wool, a piece of coal, and a bluebottle fly. Of the deaf-mutes three were operated on for adenoid vegetations; one appeared to derive slight benefit from the operation, as the tuning-fork was heard by bone conduction, which had not been so heard before. Among the chronic suppurative cases only one had facial paralysis, and one horizontal rotatory vertigo on syringing. Syphilis: there were three congenital and two acquired cases.

REPORT
OF THE
X RAY DEPARTMENT, 1897.

By A. BARRY BLACKER, M.D.,
SUPERINTENDENT OF THE DEPARTMENT.

At the end of the second year the X ray department may be considered to have passed through the experimental stage, and to be fairly established. No alterations have been made in the apparatus used, except the addition of a "Wimshurst" induction machine as an aid to the coil in working with the fluorescent screen; but unfortunately four of the large glass plates have been broken one after the other, without any appreciable results having been obtained. This is the more annoying, as the "Wimshurst" which it was proposed to use is the machine so familiar to old St. Thomas's students when the late Dr. Stone was the lecturer on Physics. However, there is great hope that during this forthcoming year it will be in full working order, and the coil which has had so much to do may be relieved.

During the year upwards of 560 examinations and skia-grams have been made, which is in itself a fair example of the work which the department should be prepared to undertake.

Of these examinations, as might have been supposed, the majority were cases in which foreign substances had obtained an entry into the body, either through the skin or through one of the orifices. Next in point of numbers come the examinations of obscure fractures, surgical diseases generally, medical cases, and lastly dislocations in which the diagnosis proved difficult.

Of the foreign bodies the majority consisted of needles and pins in the upper and lower extremities, to the number of 102; the remainder to the number of 38 were located in various other parts of the body, and consisted chiefly of coins, false teeth, slate pencils, and in one case, a chain. The coins in the alimentary canal consisted of two pennies, eight halfpennies, and four farthings. 28 embedded bullets which were difficult to trace without the assistance of the X rays were observed; these were situated in the head, thorax, abdomen, and extremities. 108 fractures were examined, chiefly in the vicinity of joints; and the number of dislocations was 34, mainly of the shoulder, elbow, and the hip.

Among the examinations included under the heading of surgical and medical diseases were those of suspected calculi, both renal and vesical. Of the former there were 17 cases, in 11 of which the result of the examinations was negative, although in one case a very large calculus was subsequently removed, and in another a mass of small calculi: in the remaining 6 an opinion was given that a calculus was probably present, although in no case could it be definitely stated that one existed, so that it would seem that in no doubtful case is it wise to neglect the precaution of an X ray examination. Moreover, it seems probable that when more is known of the practical working of the tubes more satisfactory results will be obtained. With vesical calculi the stone was clearly defined. Tumours of bone, inflammation of periosteum, and deformities were also examined.

From the medical side 40 cases of lung disease, rheumatoid arthritis, gout, and aneurysm were examined; in the last the X rays would seem to be of some assistance in helping to clear up the diagnosis, the examination with the screen being rapid and effective, and the possibility of distinguish-

ing between foreign growths and the aneurysm of much moment.

The following cases, of more than passing interest from the comparative novelty of the method of examination, are given separately, the numbers referring to the register in the department.

54. S. B—, æt. 33, female. Swallowed a pin eleven months previously, which was seen a half-inch below and parallel with the ramus of the inferior maxilla on the right side.

99. C. B—. Wounded in the Benin expedition ; wound of entry on the left side ; mass of metal observed on the right side of the last dorsal vertebra.

106. F. C—. Self-inflicted wound with pistol, of left parietal bone ; position of bullet clearly distinguished.

107. F. E—. Central sarcoma of the lower extremity of the right radius.

125. G. S—. Wounded in the Crimean war ; bullet seen embedded in the upper part of the right acetabulum.

139. A. B—, æt. 48, male. Swallowed set of false teeth consisting of plate and eight teeth, seen in lateral view between the levels of the cricoid and thyroid cartilages, immediately in front of the bodies of the vertebræ, and in the antero-posterior view from behind as a semicircular object with the convexity to the right side of the vertebræ, about two inches in length.

243. H. S—, male, æt. 41. Sarcoma of the head of right humerus.

270. J. W. U—. Revolver wound received in Durban ; bullet entered on left side of chest near to fourth rib, one inch from the edge of the sternum ; seen in anterior view half an inch below and one and a half inches external to the right nipple, and viewed from posterior surface slightly internal to the angle of the right scapula ; the ribs in respiration move over the shadow of the bullet, estimated to be roughly one and a half inches from the posterior surface of the trunk.

276. W. B—. Sarcoma of fifth metatarsal bone of left foot.

338. E. M—, æt. 20, male. This was an extremely interesting case from an X ray point of view, showing one

of the errors which are inseparable in attempting to give a diagnosis from the observation of shadows. Early in the year the patient was understood to have presented two pistols to his head, one a revolver and the other a toy pistol; his condition, however, was unfortunately not such as to allow of exact information being obtained. Wounds were seen on either side of the head, and both optic nerves were divided. On examination with the platino-cyanide screen two foreign bodies were seen, which were thought to be the *bullets*, lying at the posterior and superior part of the right orbital fossa. These were seen on examination in the lateral view; from before backwards, however, only one shadow was observed in the roof of the right orbit. When a post-mortem examination was made some days later no bullets were found, although a very careful search was made for them, and two small pieces of *necrosed bone* were seen in the position indicated by the screen examination.

345. H. C—, æt. 64, male. A case of calcareous arteries; shadows were thrown on the screen by the carotids, the radials, and the posterior interosseous arteries in the arms; the arch of the aorta was also seen to throw a shadow, which was darker than is usually the case.

440. Mrs. L—, æt. 35. This was a case which was sent to the hospital as a fracture of the lower end of the radius with displacement. A sarcoma was observed.

476. H. J—, æt. 27. A wound of the left tibia, from which a large portion of the bullet had been removed in the Turko-Grecian war; the outer shell of the bullet was found still embedded in the tibia.

507. E. M—. Sarcoma of the head of the left tibia.

578. F. C—, æt. 23 (*vide ante*, No. 106). Second suicidal attempt with pistol; wound of entry through trephine hole for former bullet wound. The two bullets were seen situated in the temporo-sphenoidal lobe of the right side, and separated by an interval of about half an inch.

Undoubtedly the greatest advance during the year has been in the duration of exposures, which are now on an average one fourth as long as they used to be, which has much increased the efficiency of the department.

GENERAL INDEX

TO THE

ST. THOMAS'S HOSPITAL REPORTS

FOR

VOLS. I—XXV, NEW SERIES.

IN bringing the Index of the Reports up to date, it has been thought well to make some slight variation in the arrangement adopted by Mr. Wagstaffe in that to the first twelve volumes.

The large increase in the amount of matter to be included suggested the advisability of separating the names of authors from the subject Index, and when this was done it seemed better to give the full titles of the contributions as appended by the authors themselves. In other respects the arrangement differs little. Where, however, a paper consists of remarks on a series of cases of a different nature, a table of contents to the paper has been added in the first section. A reference to the name of Mr. Le Gros Clark will at once explain the last point.

In making the Index the compiler has much regretted that the immense mass of material in the annual reports of the registrars could not be included. Such an addition would, however, have entailed a very considerable expense, and, if it be borne in mind by the searcher that the reports are drawn up on a uniform plan, can scarcely be considered a necessity.

This prefatory note would be hardly complete without a hearty acknowledgment by the compiler of the help he has derived from the previous index to volumes i—xii, and he would take this opportunity of thanking Mr. Wagstaffe, on the part of the Subscribers to the Reports, for the same.

G. H. M.

GENERAL INDEX

TO THE

ST. THOMAS'S HOSPITAL REPORTS

FOR

VOLS. I—XXV, NEW SERIES.

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St. Thomas's Hospital MEDICAL SCHOOL



CALENDAR AND PROSPECTUS

FOR THE
YEAR COMMENCING OCTOBER 1ST, 1898.



1898 & 1899.

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THE ST. THOMAS'S HOSPITAL AMALGAMATED CLUBS.

The several Students' Clubs were amalgamated in July, 1888, and are maintained by the subscriptions of the Members, and by a yearly grant from the Medical and Surgical Officers and Lecturers.

The Amalgamated Clubs comprise the Students' Club, the Medical and Physical Society, the St. Thomas's Hospital Gazette, and the following Clubs:—Athletic, Chess, Cricket, Cross Country, Football (Rugby and Association), Lawn Tennis, Rifle, Rowing, and Swimming.

All Students are strongly advised to join the Amalgamated Clubs when they enter the Medical School. They are then able to spend the whole day at the School, all meals being obtainable at a moderate tariff, and they are further provided with facilities for exercise and recreation.

New Club premises adjoining the Medical School were opened in June, 1894. They contain a Dining Room (51 ft. × 39 ft.) and a Smoking and Reading Room (distinct from the School Library), 51 ft. × 29 ft., supplied with Daily and Illustrated Weekly Papers, and a Gymnasium. A Cloak Room with Lockers, and a Lavatory with Bath Rooms, are in the main School-building.

A ground of more than nine acres in extent has been acquired for the Amalgamated Clubs. It is situated at Chiswick, and can be reached in 40 minutes from the Hospital, the fare being 7d. for a return ticket. It is admirably adapted for Football, Cricket, Lawn Tennis, and Athletic Sports. It is provided with a Pavilion where Refreshments can be obtained, and all Members have the use of it subject to the Rules of the various Clubs.

The Annual Subscription to the Amalgamated Clubs is Two Guineas. After the payment of five consecutive subscriptions the Student becomes a Life Member.

Life Membership may be compounded for in the first year by payment of Seven Guineas; in other years, by payment of Six Guineas.

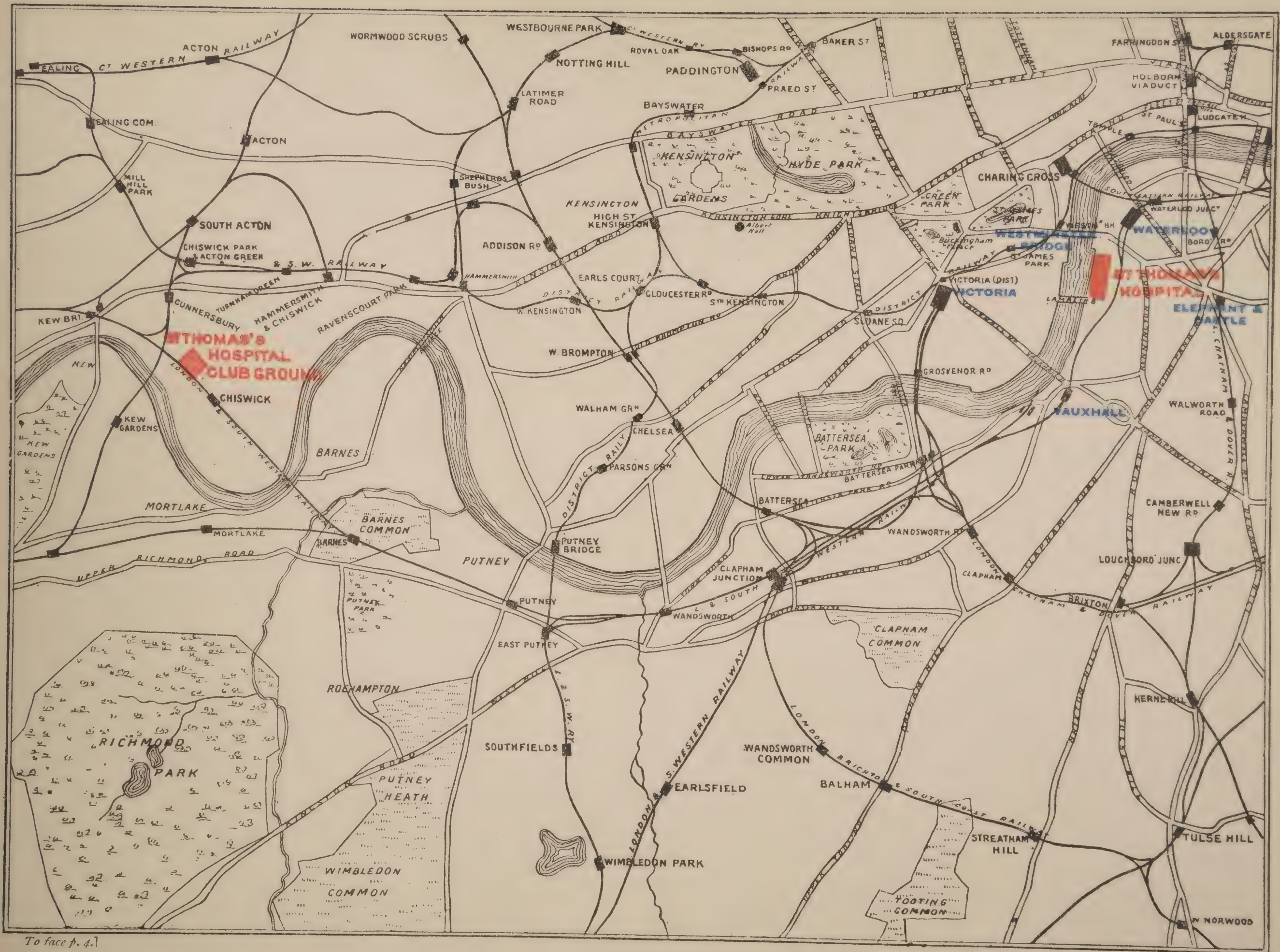
Subscriptions or Composition Fees may be paid to the Medical Secretary, Mr. G. RENDLE, or the Librarian, Mr. G. S. SAUNDERS.

MEDICAL SCHOOL.

A Register of LODGINGS suitable for Students has been recently revised, and is kept in the Secretary's Office. Information as to terms, accommodation, &c., can be obtained on application. This Register has been especially prepared with a view to the convenience of new Students for whose accommodation in lodgings or otherwise no definite arrangements have been made.

Medical Practitioners, Clergymen, and Private Families residing in the neighbourhood receive Students for residence and supervision.

For information on all matters relating to the Medical School, Prizes, Scholarships, &c., application should be made to the Medical Secretary, Mr. G. RENDLE, at the Hospital, Albert Embankment, S.E., personally (10 to 4, Saturday, 10 to 1) or by letter.



To face p. 4.]

St. Thomas's Hospital

MEDICAL SCHOOL.

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The WINTER SESSION 1898-99 will commence on October 3rd, and terminate on March 31st.

The SUMMER SESSION will begin on May 1st, and terminate on July 29th.

The Prizes will be distributed by the Right Rev. the Lord Bishop of Rochester, in the Governors' Hall, on MONDAY, October 3rd, at 3 P.M. During the afternoon the various Departments of the Hospital and School will be open for the inspection of Visitors.

Refreshments will be provided in the Student's Club.

The Annual Dinner, in which all former and present Students are invited to join, will take place the same evening at the Whitehall Rooms, Hotel Métropole, at 6 for 6.30 o'clock, Dr. Leonard W. Sedgwick in the Chair.

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THE first Hospital of St. Thomas, within the precinct of the Priory of St. Mary Overie, being destroyed by fire in the year 1207, the prior and convent erected in the same year near the site of their house a temporary hospital. This building was in the emergency used for religious purposes ; mass was said there until the priory was rebuilt. In 1228 Peter de Rupibus, Bishop of Winchester, built the Hospital of St. Mary or St. Thomas, Overie, on the opposite or eastern side of the highway, on land provided by Amicius, Archdeacon of Surrey, and dedicated it to St. Thomas the Martyr.

The following is a translation of the "charter" of 1228 :—

"The Lord Peter's charter of indulgence for twenty days granted by him for this hospital.

"Peter, by the grace of God Bishop of Winchester, to all the faithful in Christ in the diocese of Winchester, greeting. In Him who is the salvation of the faithful. As saith the Apostle, bodily discipline which consists in fasts, vigils, and other mortifications of the flesh, profiteth little, while piety availeth for all things, having the promise of the life which now is, and of that which is to come.

"Our Lord Jesus Christ among the works of piety enumerates, commends, and teaches us to fulfil six, as though more praiseworthy and more meritorious than the rest, saying, 'I was an hungred, and ye gave Me to eat ; I was thirsty, and ye gave Me to drink ; I was a stranger, and ye took Me in ; I was naked, and ye clothed Me ; I was sick, and ye visited Me ; in prison, and ye came to Me.' To them that perform these works of piety He shall grant His blessing and the glory of His heavenly kingdom, saying, 'Come, ye blessed of My Father, receive the kingdom which has been prepared for you from the beginning of the world.' But to them that neglect and do not perform works of compassion He threatens His curse and the penalty of eternal fire, saying, 'Go, ye cursed, into eternal fire, which has been prepared for the devil and his angels.' It is therefore to be

borne in mind, my dearest sons, and more deeply laid to heart, how needful and how conducive to the salvation of our souls it is to exercise more readily those works of piety whereby blessing is promised to us, and the felicity of eternal life is gained.

"Behold at Southwark an ancient hospital, built of old, to entertain the poor, has been entirely reduced to cinders and ashes by a lamentable fire. Moreover, the place wherein the old hospital had been founded was less suitable, less appropriate for entertainment and habitation, both by reason of the straitness of the place, and by reason of the lack of water and of many other conveniences : according to the advice of us, and of wise men, it is transferred and transplanted to another more commodious site, where the air is more pure and calm, and the supply of water more plentiful. But whereas this building of the new hospital calls for many and manifold outlays, and cannot be crowned with its due consummation without the aid of the faithful, we request, advise, and earnestly exhort you all, and with a view to the remission of your sins enjoin you, according to your abilities, from the goods bestowed on you by God, to stretch forth the hand of pity to the building of this new hospital, and out of your feelings of charity to receive the messengers of the same hospital coming to you for the needs of the poor to be therein entertained, that for these and other works of piety you shall do, you may, after the course of this life, reap the reward of eternal felicity from Him who is the Recompenser of all good deeds, and the loving and compassionate God. Now we, by the mercy of God, and trusting in the merits of the glorious Virgin Mary, and the Apostles Peter and Paul, and St. Thomas the Martyr, and St. Swithin, to all the believers in Christ, who shall look with the eye of piety on the gifts of their alms—that is to say, having confessed, contrite in heart and truly penitent, we remit to such twenty days of the penance enjoined on them, and grant it to them to share in the prayers and benefactions made in the church of Winchester, and other churches erected by the grace of the Lord in the diocese of Winchester. Ever in the Lord ; Farewell."

The Bishop of Winchester or the Archbishop seems to have granted, in 1277, to the Brethren power to elect their own Master ; in a visitation, 1323, they are ordered to follow the rule of St. Augustine—the rule of the parent house—in obedience, chastity, renunciation of individual property, and the Master to eat with the Brethren.

In 1417 the Master and Brethren formed a Court of themselves, and exercised authority within the precincts of the Hospital over persons regular or secular, and in cases civil or even criminal.

The hospital, built in 1228, had by 1507 become dilapidated and insufficient ; great efforts were then made to rebuild and enlarge it.

In the Duchy of Lancaster records there is "the Rentall of Thomas Becketts hospitall in Southwarke, of all the lands and tenements belonging to the hospitall." It contains the names of the tenants and the rents paid ; it is without date, but from internal evidence must be early in the sixteenth century.

Within the precincts of the hospital was the renowned printing press of James Nycolson, who, in 1527, signed the contract for the painted windows of King's College, Cambridge, as "James Nycolson, of St. Thomas's Spyttell in Southwark." The most remarkable issue from this press was the first English Bible printed in England, inscribed thus—"Imprynted in Southwarke in St. Thomas Hospitale by James Nycolson. Dedicated by M. Coverdale to the King 1537."

About this time there were a Master, Brethren, and three Lay Sisters ; forty beds were made up for poor, infirm and impotent people, who were supplied with victuals and firing.

In the year 1535, Henry VIII. was excommunicated by Pope Paul III., and, declaring himself head of the church, proceeded to dissolve the Catholic



houses, whose large revenues went to the Crown. There seem to have been 645 monasteries and abbeys thus treated, twenty-eight of which had abbots with seats in Parliament, ninety colleges and free chapels, and 110 hospitals of various descriptions. It is certainly in favour of the sweeping change that so able and honest a man as Sir Richard Gresham, the Lord Mayor of London, should have put his hand to the following petition to the King :

"Most redowted, puyasant, and noble Prince \* \* \* \*—here and within the cytie of London be iij hospitalls or spytells commonly called Seynt Georges Spytell, Seynt Barthilmews Spytell, and Seynt Thomas Spytell, and the new Abbey of Tower Hill, founded of good devotion by auncient fathers and endowed with great possessions and rents only for the reliefe, comforte, and helping of the poore and impotent people lying in every street, offending every clene person passing by the way with theyre fylthy and nasty savors. Wherefore may it please your merciful goodness, enclyned to pytie and compassion, for the reliefe of Xts very images, created to his own similitude, to order by your high authoritie, as supreme head of this Church of England, or otherwise by your sage discretion, that your mayer of your cytie of London, and his brethren the aldermen for the time being, shall and may from henceforth have the order, disposition, rule and governaunce both of all the lands, tenements, and revenues apperteynyng and belongyn to the said hospitals, governors of them, and of the ministers which be or shall be withyn any of them, and then your grace shall facillie perceyve that where now a small number of Chanons, Priests, and Monkes be founde for theyr own profit only, and not for the common utilitie of the realme, a great number of poore, needy, syke and indugent persones shall be refreshed, maynteyned, and comforted : and also healed and cured of their infermities frankly and freely by physicions, surgeons and potycaries, which shall have stipende and salarie only for that purpose ; so that all impotent persones not able to labour shall be releved, and all sturdy beggars not willing to labour shall be punished."

St. Thomas's Hospital being claimed by the King as Church property, was surrendered to him by Thomas Thirleby, the then master, on the 15th July, 1538. It was called St. Thomas à Becket's Spittil. Its yearly revenue was estimated at £266 17s. 6d., and an annual pension of 5s. 8d. was payable by the master, and another of 2s. 1d. by the curate, to the Archdeacon of Surrey. Soon after the seizure, we find that the citizens of London purchased of the Crown some of its landed estates, producing about £160 yearly. The want of the hospital thus destroyed was felt immediately. Wounded soldiers from the army in France, and the sick poor in general were without provision or help, and Henry proposed granting to the city the Mansion house of St. Bartholomew's, the dissolved house of Grey Friars adjoining, and the unoccupied fabric of St. Thomas's Hospital. The latter was intended by Henry to receive the name of the Hospital of the Holy Trinity, and to be allotted exclusively to lame, wounded, and diseased soldiers. The monastery of Grey Friars was to be for the education and maintenance of fatherless children and those of poor parents. The intentions of Henry were overtaken by death, but not before he had conferred upon the citizens of London the Hospital of St. Bartholomew's and also that of Bethlem for lunatics.

It is from the death of Henry that the connection of St. Thomas's Hospital with the City of London appears to begin. To meet the needs of the sick and destitute who had before depended on the charity of the religious houses, a Committee or Board of Inquiry was instituted by the citizens, with the sanction of King Edward. About 2,100 souls were reported as fit recipients of relief, as fatherless children and invalids, or as "Idle rogues of both sexes who were levying contributions on public sympathy by feigned tales of sorrow." It was proposed to establish receptacles for each class in the unoccupied monastic buildings, and a pecuniary contribution was set on foot to complete the work. They bought the dissolved house of the Franciscans or

Grey Friars near St. Bartholomew's Hospital, and also by charter from the King received a grant as follows: "That the said mayor, commonalty, and citizens, and their successors, may have and enjoy all the franchises, immunities, and privileges whatever, which any Archbishop of Canterbury, and which the said Charles late Duke of Suffolk, or any master, brethren, or sisters of the late Hospital of St. Thomas in Southwark aforesaid; or any Abbot of the said monastery of St. Saviour, Saint Mary Bermondsey, next Southwark aforesaid, or any prior and convent of the priory of St. Mary Overie, ever had or enjoyed, or which we hold or enjoy, or our most dear father Henry the VIIIth, late King of England, or had enjoyed, or ought to have, hold, and enjoy the same: and that none of our heirs or successors may intermeddle with this our grant."

The Grey Friars became Christ's Hospital, and the Southwark site the Hospital of the Holy Trinity or St. Thomas's. The Lord Mayor and certain citizens then met on the 6th of October, 1552, and constituted themselves by royal permission governors of the Hospitals, and almoners of the money collected. The Hospital of the Holy Trinity they named in compliment to Edward, the "King's Hospital," and ordained it to receive 260 "wounded soldiers, blind, maimed, sick, and helpless objects."

They also directed that 380 children should be received into Christ's Hospital.

To complete the scheme, the old palace of Bridewell, in Blackfriars, where the Emperor Charles V. had lodged in 1522, when on a visit to Henry VIII., and where subsequently Wolsey had lived, was granted to the City by Edward as a house of correction for dissolute persons and idle apprentices, and for the temporary maintenance of distressed vagrants.

Lastly, the lands lately belonging to the Palace of the Savoy were conferred jointly on the three foundations; and a month only before the end of Edward's short reign, he incorporated by a second charter bearing date the 6th of June, 1553, the Lord Mayor and commonalty of the City of London in succession as perpetual governors of Saint Bartholomew's, Christ's, Bridewell, and the King's Hospital (which last received the name of ST. THOMAS THE APOSTLE), and secured to them the possession of all the estates and revenues appertaining to them by previous deeds of gift. So were the royal hospitals founded.

In 1557 the laws were framed and printed under the name of "The Order of the Hospitalls of K. Henry the VIII. and K. Edward the VI., viz., St. Bartholomew's, Christ's, Bridewell, St. Thomas's. By the Maior, Cominaltie, and Citizens of London," &c.

Successive bequests and donations continued to augment the property of the charities, but during the reigns of Elizabeth, James I., Charles I., and the Protectorate, there appear few facts to note. In the abstract of the charter of confirmation granted to the City in 1663 by Charles II. on his restoration, we find the charter of Edward acknowledged and confirmed. The Great Fire of London in 1666 injured St. Thomas's in its revenues only; and a fire in Southwark anno 1676 ceased, "as if by divine interposition," at the hospital, probably a strong and isolated block of building. Shortly after this, however, it was found necessary to rebuild the fabric, and in 1693 subscriptions were opened for this purpose. A long list of benefactions in this and the succeeding year, amounting in all to £37,769 3s., is given by Golding, who especially singles out Sir Robert Clayton for eulogium. The statue then erected to him, and still extant, was originally dated 1701, but this was altered on his death to 1714. He was the founder of the old square in which it stood, replacing what Golding terms "a low swampy structure of the monastic order." In



1707, Mr. Guy, founder of the neighbouring hospital, erected three wards at his own charge. In 1717, the back block of buildings adjoining Guy's Hospital was added. With the exception of the two large blocks forming the Borough frontage, the north wing erected in 1833, and the south wing in 1839, the fabric seems to have remained unchanged until its purchase by the railway. In the centre of the front quadrangle stood the brass statue of King Edward, by Scheemakers, erected first in 1737, in pursuance of the will of Charles Joye, some time treasurer of the hospital. It now stands in the grounds of the New Hospital.

It is a matter of more difficulty to trace the early history of the medical school in connection with the hospital. For the facts which follow we are indebted to the late R. G. Whitfield, Esq., who, from the long period during which his family had been associated with this foundation, was perhaps more qualified to speak than any other person.

The earliest mention in the hospital books of an apprentice is on December 31st, 1561. It is not until 1702 that a law is met with precluding pupils or surgeons from dissecting the dead body without permission from the treasurer.

In 1703 the grand committee resolved that no surgeon should have more than three "Cubbs," a term altered in 1758 to that of "Dressers." Besides these there were also apprentices to the surgeons of the hospital, and ordinary pupils. The first mention of lectures occurs soon after the appointment of Wm. Cheselden, in 1718. These he at first gave at his own house, but afterwards by permission in the hospital. They were on anatomy and surgery. In 1723 a regular registry was ordered to be kept by the apothecary, of pupils entering to surgical practice. In 1725, Guy's Hospital was opened for the reception of patients. In 1751 the assistant-physician was allowed to take two pupils for his own benefit. In 1768 an additional surgeon, Mr. Joseph Else, was elected to read lectures to the pupils.

The students of Guy's Hospital had by courtesy been allowed to attend the operations, and a similar favour admitted the St. Thomas's men to those at Guy's. But on the 8th November, 1768, it was formally resolved that the pupils of each hospital have the liberty of attending not only the operations, but surgical practice, and the money to be divided between the six surgeons and two apothecaries. Hence the appellation of the "United Hospital"; an amalgamation never extended beyond the surgical practice.

To Mr. Else is due the foundation of a regular anatomical school. Mr. Cline, who in 1781 was appointed to read lectures conjointly with Mr. Else, was mainly instrumental in bringing it to its greatest celebrity. At Mr. Else's death, Mr. Cline purchased the collection of preparations made by him and Mr. Girle, a former surgeon, which are now in the hospital museum, and became sole lecturer on anatomy. In 1788 he also became surgeon to the hospital. Mr., afterwards Sir Astley, Cooper was apprenticed to Mr. Cline in 1784, and before his election, as one of the surgeons to Guy's Hospital in 1800, was joint lecturer with his teacher on anatomy and surgery. They both added materially to the pathological museum.

In 1812 Mr. Henry Cline was elected surgeon to St. Thomas's Hospital on his father's resignation, and carried on the anatomical lectures conjointly with Astley Cooper. In 1813 a new anatomical theatre and museum were built, the hospital giving £3,000 for the purpose, and the two lecturers £1,000 each. In 1815 Mr. Benj. Travers, an apprentice of Astley Cooper's at Guy's, was elected surgeon, according to the established rule which gave the vacancy to the senior apprentice of either institution. Mr. Travers joined in the lectures, devoting his attention specially to ophthalmic surgery. In 1820 Mr. Joseph Henry Green was elected surgeon, on the death of his cousin, Mr. Hy. Cline, having been apprenticed to his uncle, Mr. Cline, in



the year 1809. From 1820 to 1825 he lectured with Astley Cooper. At this period all the branches of medical study,—viz., medicine, chemistry, *materia medica*, midwifery, botany and physiology—were lectured on at Guy's Hospital, and no physician of St. Thomas's was allowed to share them.

In 1824 Sir A. Cooper resigned the surgical chair, and Mr. C. Aston Key, his apprentice and nephew by marriage, joined Mr. Green in the office. Mr. Frederick Tyrrell, standing in exactly the same relation to Cooper, received permission to lecture on diseases of the eye. In the following year Cooper showed signs of cerebral disturbance, and the family desired that his nephew,

1. Bransby Cooper, should be his successor. But the claims of Mr. John Flint South were considered superior, and he was appointed. From this cause the "United Hospitals" were severed, and a complete school set up in both. The majority of the students clung to Guy's where the prestige of the great Sir Astley was still strong; and St. Thomas's school began to sink. The establishment of the Aldersgate Street private school under Tyrrell and Lawrence materially aided in this declension, as did also the secession of Dr. Elliotson to the newly-established University College, and the foundation of a fresh school at King's College, where for a time the surgical lectures were given by Mr. Joseph Henry Green, although a surgeon of St. Thomas's.

Owing to the unprosperous state of affairs in 1842, the Governors came forward to reorganize the school, and the aid of Mr. R. D. Grainger, whose popularity had been established in the Webb Street private school, was obtained. Mr. Joseph H. Green also rejoined the school; and Dr. Marshall Hall, Dr. Hodgkin, Dr. Martin Barry, Dr. Gregory, and Mr. Benjamin Travers contributed to its efficiency. In 1847 the Governors added to the School a lectureship on general pathology in connection with the hospital practice, and appointed to that lectureship and the associated clinical duties Mr. John Simon, whom afterwards (1853) they made one of the surgeons. In 1855 they added a lectureship on public health, and appointed to it Dr. Headlam Greenhow, who afterwards became physician to the Middlesex Hospital. This state of affairs continued until 1858, when the Governors gave back the management, and its attendant risks, into the hands of the lecturers.

For some years it was maintained with difficulty, and much self-sacrifice on the part of the staff, during what may be termed a transitional period, in the hope, now realized, of its once more developing into an institution worthy of its old traditional glories.

From its foundation down to the year 1862, the hospital occupied the original site near London Bridge, but in that year the property was sold for the extension of the railway accommodation, and the establishment temporarily removed to the Surrey Gardens, where it was carried on till the summer of 1871. In 1868 the first stone of the New Hospital at Westminster Bridge was laid by the Queen, and the completed building was opened by her Majesty in 1871. In September the patients were first admitted into the New Hospital, and the Medical School was opened on October the 2nd.

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## NIGHTINGALE NURSING SCHOOL.

The Committee of the "NIGHTINGALE FUND" have arrangements with the authorities of St. Thomas's for educating Women in the practice of Hospital Nursing. On the satisfactory completion of one year's probationary training, they will be required to enter into service as Nurses in St. Thomas's or some other Hospital or Infirmary. A limited number of gentlewomen can be admitted under special agreements to this course of training, with a view to qualify themselves for superior appointments, or as District Nurses.

The Regulations as to the admission of Candidates may be obtained by writing to Miss L. M. Gordon, the Matron, St. Thomas's Hospital, London, S.E., to whom also application should be made by Institutions requiring trained Superintendents or Nurses.

Candidates should, whenever it is possible, make personal application to Miss Gordon, at the Matron's Office, at 10.30 a.m. on Tuesday or Friday.

The Nightingale Fund is the proceed of a public subscription raised at the close of the Crimean War, as a tribute to Florence Nightingale, for the services rendered by her in tending the sick and wounded soldiers in the Military Hospitals on the Bosphorus and at Balaklava. It was, by her request, vested in Trustees to enable her to establish an Institution for the training, sustenance, and protection of Nurses and Hospital attendants, and, as invested, produces an income of £1,400. The Fund is managed by a Council, appointed by her. The School was opened at old St. Thomas's in 1860 with 12 probationers, increased to 45 at the present time. 1,452 candidates have been admitted and 864 trained nurses have received appointments; many of these are now Matrons or Superintendents of Nurses.

The Secretary to the Council is Mr. Henry Bonham-Carter, 5 Hyde Park Square, W.

## THE HOSPITAL.

The original Hospital latterly contained 500 beds. The present building contains in all 572 beds. It consists of six blocks appropriated to the reception of patients; with one for the administrative and other offices, and one for the Medical School. The Ward blocks, though connected by corridors, stand apart, so as to afford free exposure in all directions. The Wards, with the exception of four which are placed on the ground floor, occupy the first, second, and third floors. Generally, each Ward affords accommodation for 28 beds, which are placed against the piers between the windows, so as to secure thorough ventilation. In a small Ward annexed to each larger Ward there are two beds for cases requiring special care or treatment.

The operating theatres are unusually large, and have been lately thoroughly refitted, refloored, and provided with electric lighting. They are now peculiarly well adapted for the carrying out of aseptic surgery.

A Clinical Laboratory, which is quite distinct from the laboratories in the Medical School, has been recently erected on the east side of the Hospital, and is provided with every facility for bacteriological, microscopical, and chemical examination of the condition of the patients in the Wards. The investigations are carried on in the laboratory by the Superintendent, whose whole time is devoted to this work, which comprises all those methods of examination which from their difficulty and complexity cannot be carried out at the bedside, and they have in view the completion of the Hospital record of each patient.

Of the whole accommodation of the Hospital, about 210 beds are appropriated to Medical cases, and 270 to Surgical cases. There are special Wards for the reception of diseases peculiar to women (21 beds); for diseases of the eye (25 beds); and for children under 6 years of age (30 beds). In one of the blocks, separated from the rest of the establishment, there are Wards for infectious diseases.



The space provided for each bed in the ordinary Wards is upwards of 1,800 cubic feet, and in the block appropriated to infectious diseases, about 2,500 cubic feet.

The Department for Out-patients has been recently re-arranged, and it is now perfectly adapted both for the management and treatment of patients and for the teaching of students. There have been added two large rooms, well ventilated, well lighted, provided with ample sitting accommodation, so arranged that large numbers of Students are able to follow and grasp the method of examination and the basis of treatment employed by the Assistant-Physician and Assistant-Surgeon.

There is also a series of rooms devoted to the special departments, and a room set apart and fitted up for Physical Exercises.

A very complete department for the systematic use of the Röntgen Ray photography has been fitted up at considerable expense, and has proved to be of great value as an aid to diagnosis.

During the twelve months ending December 31st, 1897, the number of patients admitted into the Hospital amounted to 6,035. In the same period, 20,141 Out-patients have been treated, and in the Maternity department 2,483 women have been attended at their own homes. Casualties, to the number of 97,046 attendances, were treated during the same period.

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## THE MEDICAL SCHOOL.

The School buildings, isolated by a large quadrangle from the Hospital, stand at its southern extremity, between the river and the gardens of Lambeth Palace. They are very commodious, and every effort has been made to provide accommodation completely fulfilling modern requirements.

In the year 1885 the Anatomical Department was much enlarged and remodeled. In 1892 considerable alterations were carried out in the Physiological Department, giving increased space in the Laboratory and providing facilities for lectures and lantern demonstrations. In 1893-4 further extensive alterations were made. Two new wings were added to the main building, containing a large laboratory for the classes in Elementary Biology and Pathology, private working rooms for the teachers in those departments, a dissecting room for the Biology class, improved accommodation for the Operative Surgery class, and a large class room for the classes in Practical Surgery. At the same time the collection of Physical Apparatus was removed to a laboratory *en suite* with the Chemical Department.

New premises were also provided for the Students' Club, to which a Gymnasium has been added, and the arrangements are now such as to render it quite unnecessary for Students to leave the School buildings during the working hours of the day. Electric Lighting has been introduced into the new departments and part of the older building.

The plan inserted between pages 14 and 15 shows the changes in detail, both on the ground and first floors.



## THE MUSEUM OF HUMAN AND COMPARATIVE ANATOMY AND PATHOLOGY.

*Curator.*—S. G. SHATTOCK, Esq., F.R.C.S.

The Museum, which is of ample size and well lighted, has two galleries devoted entirely to the display of specimens illustrating Pathology; the different series are each preceded by a normal preparation of the organ to which they refer.

On the ground floor are the collections of Normal Human, and of Comparative Anatomy; there is, moreover, a series of type specimens of Pathology, selected to facilitate the study of this subject.

THE COLLECTION OF HUMAN ANATOMY contains a large number of dissected Preparations, illustrating the Organs of Locomotion and Sense; the Nervous System; the Digestive, Respiratory, and Urinary Apparatus; the Vascular System and Organs of Reproduction; and, in addition, a series of elaborate dissections. A new Catalogue of this collection has been drawn up by Mr. Shattock.

THE PATHOLOGICAL COLLECTION contains above 3,000 specimens, arranged in series as follows:—Injuries and Diseases of the Organs of Motion; of the Organs of Digestion, of Circulation, of Respiration, of the Nervous System, of the Genito-Urinary System, and Malformations. The descriptive Catalogue of this collection has been entirely re-written by Mr. Shattock: the previous edition was edited by Mr. Sydney Jones.

Among the earliest contributors to the Museum were Mr. Cline, Sir A. Cooper, Mr. Travers, and Mr. Tyrrell; and many of the specimens are of great historical interest; those used by Sir A. Cooper to illustrate his works on Dislocations and Fractures, on Hernia, and on the Testis, are contained amongst them, as well as two preparations showing the result of Ligature of the Abdominal Aorta, one a case of Sir A. Cooper's, another that of Mr. J. F. South's. In the collection, too, are Mr. Travers's preparations illustrating the process of nature in repairing Injuries of the Intestines, and those furnished by his experiments on the ligature of Arteries.

The section of Fractures has been enriched by Sir William MacCormac, who presented numerous specimens of gun-shot injuries, etc., obtained from cases under his care during the Franco-German War (1870); that of Diseases of the Liver, by a large number of Biliary Calculi presented by Dr. Ord; and that of Diseases of the Larynx, by specimens presented by Sir Felix Semon.

THE COLLECTION OF COMPARATIVE ANATOMY comprises about 400 dissected Preparations, and in addition an equal number of most carefully prepared osteological specimens. A large number of these dissections were made by Sir A. Cooper, to illustrate his Lectures, when Professor of Comparative Anatomy to the Royal College of Surgeons. A new Catalogue of this collection has been drawn up by Mr. F. G. Parsons.

THE CABINETS OF MICROSCOPICAL ANATOMY, which are under the charge of the Demonstrator of Practical Physiology, are available for

use by Students who wish to examine them, subject to such regulations as may be deemed necessary.

THE MATERIA MEDICA MUSEUM contains in cases a complete collection of all the chemicals and organic substances included in the British Pharmacopœa; all these are named and numbered. A second collection of all the chief medicinal substances is placed in drawers and is freely accessible to students. A large and very fine collection of dried medicinal plants, named according to the latest nomenclature, is displayed on the walls of the Museum.

The Museum is under the conjoint superintendence of the Lecturer on Pharmacy and Pharmacology and Mr. Shattock.

THE COLLECTION OF CHEMISTRY AND MINERALOGY is under the superintendence of Mr. Dunstan. The majority of the specimens were presented by the late Dr. Bernays.

The Museums are open to Students daily from 9 a.m. till 5 p.m., and every encouragement is given to Students to make use of the well-arranged educational series.

## THE LIBRARY.

*Librarian* :—G. S. SAUNDERS, ESQ.

The Library, to which Students have access with the permission of the Librarian, and which can be used by them as a Reading Room, has been recently completely re-arranged and re-catalogued, and electric lighting has been introduced. It contains a valuable collection of standard works; various periodicals are regularly taken in, and a number of modern text books are added from time to time for reference.

## LABORATORIES, THEATRES AND CLASS ROOMS.

The Chemical, Physiological, and Anatomical Departments are complete in themselves. They consist of large Laboratories for Classes, Private Laboratories, and each is provided with its own Lecture Room. A separate Laboratory for the practical teaching of Physics contains the Physical Apparatus.

The Pathological Department beyond the Museum and Post Mortem rooms is provided with a large Laboratory for the Class in Pathological Histology, and a Bacteriological Laboratory under the charge of Mr. Shattock.

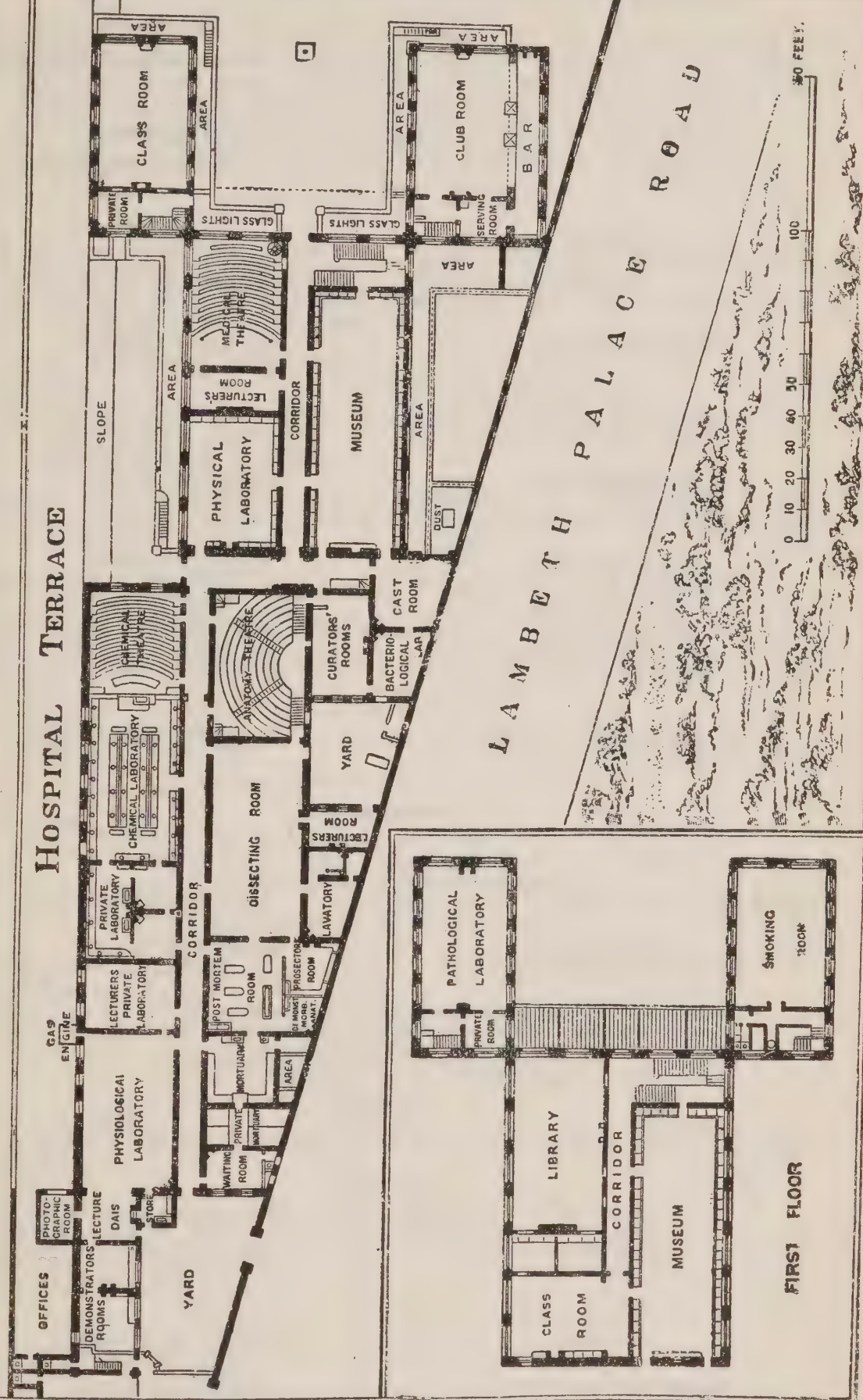
The Elementary Biology lectures and demonstrations are given in the large new Laboratory, and the Biological Dissecting Room and Lecturers' Private Room are contained in the same building.

A special Theatre is devoted to the use of the Lecturers giving the more advanced systematic courses, such as Medicine, Surgery, &c., and two large class rooms are available for the Tutorial Classes held in connection with these courses. Special accommodation has also been provided for the Classes in Operative Surgery.

The new buildings were opened by H.R.H. the Duke of Connaught, K.G., President of the Hospital, on June 9th, 1894.



HOSPITAL TERRACE



GROUND PLAN.

J.T. BALCOMB, DEL. ET SC.





## MEDICAL AND SURGICAL OFFICERS

**Consulting Physicians.**—JOHN HARLEY, M.D. Lond., W. M. ORD, M.D. Lond.

**Consulting Surgeons.**—Sir JOHN SIMON, K.C.B., Hon. M.D. Dub., F.R.S., D.C.L.; SYDNEY JONES, M.B. Lond.; JOHN CROFT; Sir WILLIAM MACCORMAC, Bart., M.A., D.Sc., M. Ch. Hon. Causâ, Pres. R.C.S. Eng.

**Consulting Obstetric Physician.**—H. GERVIS, M.D. Lond.

**Consulting Ophthalmic Surgeons.**—R. LIEBREICH; E. NETTLESHIP.

### Physicians.

J. F. PAYNE, M.D. Oxon.  
S. J. SHARKEY, M.A., M.D. Oxon.  
T. D. ACLAND, M.A., M.D. Oxon.  
H. P. HAWKINS, M.A., M.D. Oxon.

### Assistant Physicians.

H. W. G. MACKENZIE, M.A., M.D. Cantab.  
H. G. TURNEY, M.A., M.D. Oxon.  
S. G. TOLLER, M.D., Lond.  
J. J. PERKINS, M.A., M.B. Cantab.

### Obstetric Department.

*Physician.*—C. J. CULLINGWORTH, M.D.  
*Assistant Physician.*—W. W. H. TATE, M.D. Lond.

### Throat Department.

*Surgeon.*—H. B. ROBINSON, M.S. Lond.

### Vaccination Department.

*Physician.*—R. CORY, M.A., M.D. Cantab.

### Electrical Department.

*Physician.*—H. G. TURNEY, M.A., M.D. Oxon.

### Surgeons.

H. H. CLUTTON, M.A., M.C. Cantab.  
WILLIAM ANDERSON.  
B. PITTS, M.A., M.C. Cantab.

### Assistant Surgeons.

G. H. MAKINS.  
W. H. BATTLE.  
C. A. BALLANCE, M.S. Lond.  
H. B. ROBINSON, M.S. Lond.

### Eye Department.

*Surgeon.*—J. B. LAWFORD.  
*Assistant Surgeon.*—J. H. FISHER, B.S. Lond.

### Skin Department.

*Surgeon.*—WILLIAM ANDERSON.

### Ear Department.

*Surgeon.*—C. A. BALLANCE, M.S. Lond.

### Dental Department.

*Surgeon.*—C. E. TRUMAN, M.A. Cantab.

**Resident Assistant Physician.**  
C. R. BOX, M.D. Lond.

**Resident Assistant Surgeon.**  
C. S. WALLACE, B.S. Lond., F.R.C.S.

### Anæsthetists.

WALTER TYRRELL, E. H. G. MORRIS, B.A., M.B. Cantab.,  
H. LOW, M.A., M.B., B.C. Cantab., H. C. CROUCH.

### Demonstrators of Morbid Anatomy.

H. W. G. MACKENZIE, M.A., M.D. Cantab., H. G. TURNEY, M.A., M.D. Oxon.,  
J. J. PERKINS, M.A., M.B. Cantab.

### Consulting Chemist.

WYNDHAM R. DUNSTAN, M.A. Oxon.,  
F.R.S.

### Pharmaceutist.

EDMUND WHITE, B.Sc. Lond.

### Superintendent of the X Ray Department.

A. BARRY BLACKER, M.D.

### Superintendent of the Clinical Laboratory.

L. L. JENNER, M.A., M.B. Oxon.

### Registrars.

#### Medical.

A. E. RUSSELL, M.D. Lond.

#### Surgical.

E. O. THURSTON, F.R.C.S.

#### Obstetric.

J. S. FAIRBAIRN, B.A., M.B.,  
B. Ch. Oxon.

### Lecturers.

A. W. BENNETT, M.A., B.Sc. Lond.  
T. GREGOR BRODIE, M.D. Lond.  
WYNDHAM R. DUNSTAN, M.A., F.R.S.  
F. G. PARSONS, F.R.C.S.

H. RAYNER, M.D.  
EDWARD SEATON, M.D.  
S. G. SHATTOCK, F.R.C.S.

### Curator of the Museum.

S. G. SHATTOCK, F.R.C.S.

### Librarian.

G. S. SAUNDERS.

### Dean of the School.

H. P. HAWKINS, M.A., M.D. Oxon.

### Secretary to the School.

GEORGE RENDLE, M.R.C.S.

## LECTURERS AND DEMONSTRATORS.

## LECTURERS.

|                                                                    |                                                   |
|--------------------------------------------------------------------|---------------------------------------------------|
| <i>Elementary Biology</i> ... ..                                   | Mr. PARSONS.                                      |
| <i>Chemistry, Chemical Physics, and Practical Chemistry</i> ... .. | Mr. DUNSTAN.                                      |
| <i>Descriptive Anatomy</i> ... ..                                  | Mr. ANDERSON and Mr. MAKINS.                      |
| <i>General Anatomy and Physiology</i> ...                          | Dr. BRODIE.                                       |
| <i>Practical Physiology and Histology</i> ...                      |                                                   |
| <i>Midwifery, and Diseases of Women</i> ...                        | Dr. CULLINGWORTH.                                 |
| <i>Practical and Manipulative Surgery</i> ...                      | Mr. BALLANCE and Mr. BATTLE                       |
| <i>Medicine</i> ... ..                                             | Dr. PAYNE and Dr. SHARKEY.                        |
| <i>Surgery</i> ... ..                                              | Mr. CLUTTON and Mr. PITTS.                        |
| <i>Pathology and Bacteriology</i> ... ..                           | Dr. HAWKINS, Dr. TURNEY and Mr. SHATTOCK.         |
| <i>Forensic Medicine and Toxicology</i> ...                        | Dr. CORY and Dr. TURNEY.                          |
| <i>Pharmacology and Therapeutics</i> ...                           | Dr. MACKENZIE.                                    |
| <i>Diseases of the Eye</i> ... ..                                  | Mr. LAWFORD.                                      |
| <i>Mental Diseases</i> ... ..                                      | Dr. RAYNER.                                       |
| <i>Public Health and Sanitary Science</i> ...                      | Dr. SEATON.                                       |
| <i>Clinical Surgery</i> ... ..                                     | Sir WILLIAM MACCORMAC, Bart. (EMERITUS LECTURER). |
| <i>Clinical Medicine</i> ... ..                                    | The PHYSICIANS.                                   |
| "    " <i>Obstetric</i> ... ..                                     | Dr. CULLINGWORTH.                                 |
| " <i>Surgery</i> ... ..                                            | The SURGEONS.                                     |
| "    " <i>Ophthalmic</i> ... ..                                    | Mr. LAWFORD.                                      |
| <i>Physics</i> ... ..                                              | Mr. DUNSTAN.                                      |
| <i>Botany</i> ... ..                                               | Mr. BENNETT.                                      |
| <i>Comparative Anatomy and Zoology</i> ...                         | Mr. PARSONS.                                      |

## TEACHERS AND DEMONSTRATORS.

|                                                |                                                                           |
|------------------------------------------------|---------------------------------------------------------------------------|
| <i>Chemistry</i> ... ..                        | Dr. CROSSLEY and Mr. LE SUEUR.                                            |
| <i>Physics</i> ... ..                          | Mr. LE SUEUR.                                                             |
| <i>Practical Pharmacy</i> ... ..               | Mr. EDMUND WHITE.                                                         |
| <i>Practical Anatomy</i> ... ..                | The LECTURERS, with Mr. PARSONS, Mr. ROBINSON, Mr. STABB, and Mr. FISHER. |
| <i>Physiology and Practical Physiology</i> ... | Dr. BRODIE, with Mr. SIKES.                                               |
| <i>Practical Medicine</i> ... ..               | Dr. TURNEY and Dr. TOLIER, with Dr. RUSSELL.                              |
| <i>Practical and Manipulative Surgery</i> ...  | The LECTURERS, with Mr.                                                   |
| <i>Practical Obstetrics</i> ... ..             | DR. TATE.                                                                 |
| <i>Electro-Therapeutics</i> ... ..             | Dr. TURNEY.                                                               |
| <i>Morbid Anatomy</i> ... ..                   | Dr. MACKENZIE, Dr. TURNEY, and Dr. PERKINS.                               |
| <i>Morbid Histology and Bacteriology</i> ...   | Dr. PERKINS.                                                              |
| <i>Diseases of the Eye</i> ... ..              | Mr. FISHER.                                                               |
| "    " <i>Throat</i> ... ..                    | Mr. ROBINSON.                                                             |
| "    " <i>Skin</i> ... ..                      | Mr. ANDERSON.                                                             |
| "    " <i>Ear</i> ... ..                       | Mr. BALLANCE.                                                             |
| "    " <i>Teeth</i> ... ..                     | Mr. TRUMAN.                                                               |
| <i>Vaccination</i> ... ..                      | Dr. CORY.                                                                 |



## SUGGESTIONS TO STUDENTS ABOUT TO ENTER THE MEDICAL PROFESSION.

The commencement of Medical Study cannot be registered at the Office of the General Medical Council until the Student has passed a Preliminary Examination in the subjects of General Education as specified in the following list :

(1) English Language ; (2) Latin ; (3) Arithmetic, Algebra, and Euclid—Books I., II., III. ; (4) Either Greek, Logic or any Modern Language.

A student who has not passed such an examination is recommended to pass either the Matriculation of the University of London, or the Professional Preliminary Examination of the College of Preceptors. The regulations respecting these may be obtained from the Registrar, University of London, Burlington Gardens, W., and the Secretary, College of Preceptors, Bloomsbury Square, W.C.

Certificates of Graduation, Matriculation, and the Local Examinations of British and Colonial Universities are accepted by the General Medical Council provided that the above-mentioned subjects be shown to have been included.

Students who propose to obtain Medical Degrees in the University of London must pass both the Matriculation and the Preliminary Scientific Examinations before commencing their regular Medical Studies.

For the Preliminary Scientific Examination and the Intermediate Examination in Medicine special classes are held during the Winter and Summer Sessions (see p. 38).

**For a Student who enters in October**, intending to obtain the double qualification of the "Conjoint Board" (L.R.C.P. Lond. and M.R.C.S. Eng.), the following course of study is recommended. (For days and hours of Lectures, &c., see Time Table, p. 28.)

All Students are required to apply to the Medical Secretary for cards of Admission to the Lectures, &c., of each Session.

### First Winter Session.

**Lectures, &c.** Anatomy, Elementary Biology, Elementary Physiology, Chemistry, Practical Chemistry, and Physics. Anatomical and Physiological Demonstrations. Dissections.

**Examinations.** "Sessional" at Medical School in December and in March. Part III. (Elementary Biology) of First Examination of the "Conjoint Board," in March.

### First Summer Session.

**Lectures, &c.** Chemistry, Practical Chemistry, Histology, Demonstrations in Practical Pharmacy ; Practical Instruction in Pharmacy may be obtained from the Hospital Pharmaceutist. (Fee, three guineas for three months, p. 37.)

**Examinations.** "Sessional," and Parts I. (Chemistry and Physics) and II. (Practical Pharmacy)<sup>†</sup> of the "First Conjoint," in July.

\* The Regulations of the General Medical Council with regard to Registration may be obtained from Messrs. Spottiswoode & Co., 54, Gracechurch Street, London, E.C.

† Part II. (Practical Pharmacy) *may* be deferred and taken at any time during the curriculum.

**Second Winter Session.**

Anatomy and Physiology with Demonstrations and Dissections. Practical and Chemical Physiology. Tutorial Classes in Anatomy and Physiology.

Lectures.

"Sessional" in December and in March; "Tests," and "Second Conjoint" (Anatomy and Physiology) in March.

Examinations.

N.B.—The importance of passing the second examination at this stage cannot be too strongly insisted upon, as the Student then becomes free to devote his undivided attention to the practical subjects of the curriculum needed for the final examination.

**Second Summer Session.**

Hospital Practice, Medical and Surgical.

Midwifery, Practical Surgery.

"Sessional" in July.

Lectures.  
Examinations

The course of instruction in Practical Medicine must be attended by Candidates for Out-Patient Clinical Clerkships, and the course of Elementary Practical Obstetrics by Candidates for Obstetric Clerkships.

**Third Winter Session.**

Hospital Practice, Medical and Surgical.

Medicine, Surgery, and Surgical Pathology, Practical Surgery, Practical Course of Pathological Anatomy.

Lectures.

"Sessional" in December and March.

Examinations.

Clinical Clerkship (if not held during July, August, and September), and Dressership, in the Out-Patient Departments.

Maternity Cases may be attended at any time after the Lectures on Midwifery and a course of Practical Obstetrics by Students who have passed the "Second Conjoint."

**Third Summer Session.**

Hospital Practice, Medical and Surgical, with Clerkship or Dressership.

Practical Course of Pathological Anatomy (continued), including Practical instruction in Bacteriology, Forensic Medicine, Mental Disease, Therapeutics, and Public Health.

Lectures.

"Sessional" in July.

Examinations.

**Fourth Winter Session.**

Hospital Practice, Medical, Surgical, the Special Departments, and Post-mortem Examinations. Clerk or Dress in special Departments and Post-mortem Room. Instruction in Vaccination (Fee, one guinea, p. 37).

Practical Course of Pathological Anatomy (if not taken in third winter), Clinical Lectures on Medicine and Surgery; Obstetric Demonstrations; Diseases of Women; Diseases of the Eye.

Lectures.

**Fourth Summer Session.**

Hospital Practice, Medical and Surgical, and Special Departments. Clinical Medicine, Clinical Surgery.

Lectures.

**Fifth Year.**

Hospital Practice, Medical and Surgical, and the Special Departments.

Tutorial Classes in Medicine, in Surgery, including operations upon the Dead Subject, and in Midwifery.

Attendance at a Fever Hospital and Clinical Demonstrations at a recognised Lunatic Asylum.

Advanced Students are strongly advised to avail themselves of the opportunities afforded for Clinical Study of Fevers at the Hospitals of the Metropolitan Asylums Board, and of Mental Diseases at Bethlem Hospital in their fifth year.

Candidates for part III. of the Final Examination for the Diploma in Medicine and Surgery of the "Conjoint Board" are required to produce a certificate of attendance on not less than twenty labours. Students who have passed the "Second Conjoint," and have attended Lectures on Midwifery, and a Course of Elementary Practical Obstetrics, may enter their names for the Rota of Obstetric Clerks.

No Student is admitted to part I. or II. of the Third Examination of the "Conjoint Board" until at least two years after passing the Second Examination, and five Winter and five Summer Sessions after Registration.

### Preliminary Summer Session.

If a Student enters in May, intending to obtain the qualification of the Conjoint Board, he is advised to pursue the following course of study :—

Elementary Biology, Lectures and Classes in Chemistry and Demonstrations in Practical Pharmacy.—Practical Instruction in Pharmacy may be obtained from the Hospital Pharmaceutist (Fee, three guineas for three months, p. 37).

Botany (if required for a higher examination).

Part II. (Practical Pharmacy) of "First Conjoint" in July or October.

NOTE.—Students who join a Medical School in May have the advantage of an additional three months to devote to the preparation for the three parts of the First Examination of the "Conjoint Board," and of passing in Elementary Biology at Christmas.

All Students are required by the Governors to conform to the Regulations of the Hospital and Medical School, and the School Committee is empowered, with the approval of the Treasurer, to suspend or remove a Student at any time for adequate reason. (See also p. 36.)

During the fourth and fifth years, the greater part of the time can, and should, be given to the practical study of disease in the Wards, Out-Patient Departments, and Post-Mortem Room, but Students are reminded that such courses of lectures as relate to Final Examinations may be with advantage re-attended.

Students intending to prepare for **University Degrees and other higher Examinations** should apply to the Medical Secretary for information relating thereto. (For Special Classes for these Examinations see p. 38.)

Students when qualified should use every effort to obtain one or more of the senior appointments open to them, especially those of House Physician, House Surgeon, and Obstetric House Physician. These and other appointments, of which details are given at p. 31, afford opportunities for obtaining practical professional knowledge which cannot be estimated too highly. No payment is required for any of them.

**N.B.—The Regulations for the Sessional Examinations and Prizes will be found on pp. 32-33.**



TIMES OF ATTENDANCE OF THE PHYSICIANS AND  
SURGEONS IN THE WARDS.

|                        | Mon. | Tues. | Wed. | Thurs. | Fri. | Sat. |
|------------------------|------|-------|------|--------|------|------|
| DR. PAYNE .....        | 2    | —     | —    | 2      | —    | —    |
| DR. SHARKEY .....      | —    | 2     | —    | —      | 2    | —    |
| DR. ACLAND.....        | 2    | —     | —    | 2      | —    | —    |
| DR. HAWKINS.....       | —    | 2     | —    | —      | 2    | —    |
| DR. CULLINGWORTH ..... | —    | 2     | —    | —      | 2    | —    |
| MR. CLUTTON .....      | —    | 2     | —    | —      | 2    | —    |
| MR. ANDERSON .....     | 2    | —     | —    | 2      | —    | —    |
| MR. PITTS .....        | —    | 2     | —    | —      | 2    | —    |
| MR. ....               | 2    | —     | —    | 2      | —    | —    |
| MR. LAWFORD .....      | —    | 2     | —    | —      | 2    | —    |
| CLINICAL LECTURES {    | —    | —     | 2    | —      | —    | —    |
|                        |      |       | 9.30 | —      | —    | —    |

TIMES OF ATTENDANCE OF THE ASSISTANT-PHYSICIANS  
AND ASSISTANT-SURGEONS IN THE OUT-PATIENTS' ROOMS.

|                                  | Mon. | Tues. | Wed. | Thurs. | Fri. | Sat. |
|----------------------------------|------|-------|------|--------|------|------|
| DR. MACKENZIE .....              | —    | —     | 1.30 | —      | —    | 1.30 |
| DR. TURNEY .....                 | —    | 1.30  | —    | —      | 1.30 | —    |
| DR. TOLLER .....                 | 1.30 | —     | —    | 1.30   | —    | —    |
| DR. PERKINS .....                | 1.30 | —     | —    | 1.30   | —    | —    |
| DR. TATE (Women and Children)... | —    | —     | 1.30 | —      | —    | 1.30 |
| MR. MAKINS .....                 | —    | —     | —    | —      | —    | —    |
| MR. BATTLE .....                 | —    | 1.30  | —    | —      | 1.30 | —    |
| MR. BALLANCE .....               | 1.30 | —     | —    | 1.30   | —    | —    |
| MR. ROBINSON .....               | —    | —     | 1.30 | —      | —    | 1.30 |

TIMES OF ATTENDANCE IN THE OUT-PATIENT SPECIAL  
DEPARTMENTS.

|                                   | Mon. | Tues. | Wed.  | Thurs. | Fri. | Sat. |
|-----------------------------------|------|-------|-------|--------|------|------|
| MR. LAWFORD } (Diseases of {      | —    | 1.30  | —     | 1.30   | 1.30 | —    |
| MR. FISHER } the Eye) {           | 1.30 | —     | 1.30  | —      | —    | —    |
| MR. ROBINSON (Diseases of Throat) | —    | —     | —     | 1.30   | —    | —    |
| MR. ANDERSON (Diseases of Skin).  | —    | —     | —     | —      | 1.30 | —    |
| MR. BALLANCE (Diseases of Ear)..  | 1.30 | —     | —     | —      | —    | —    |
| DR. TURNEY (Electro-Therapeutics) | —    | —     | —     | 2      | —    | —    |
| DR. BLACKER (X Ray).....          | —    | 2     | —     | —      | 2    | —    |
| MR. TRUMAN (Diseases of Teeth)..  | —    | 10    | —     | —      | 10   | —    |
| DR. CORY (Vaccination) .....      | —    | —     | 11.30 | —      | —    | —    |
| DR. RAYNER (Mental Diseases) ...  | —    | —     | —     | 10     | —    | —    |

# HOSPITAL PRACTICE.

## CLINICAL TEACHING OF MEDICINE AND SURGERY.

CLINICAL instruction is given daily by the Physicians and Surgeons during their visits to the Wards, and by the Assistant Physicians and Assistant Surgeons in the Out-Patient Departments (Time Table, p. 20). Clinical Lectures in Medicine and Surgery are given every Wednesday throughout the sessions at 2 p.m. and 9.30 a.m. respectively. A Special Course is also given by Sir W. MACCORMAC, Bart.

**Diseases of Women.**—Clinical instruction is given in Adelaide Ward on Tuesdays and Fridays at 2 p.m., and in the Out-Patient room on Wednesdays and Saturdays at 1.30 p.m.

**Diseases of Children.**—Instruction is given in the Out-Patient room.

**Midwifery.**—A maternity department is connected with the hospital, women being attended in confinement at their own homes by students of the hospital, under the supervision of the Assistant Obstetric Physician (p. 32). Students are accompanied to their first three cases by one of the Obstetric House Physicians.

**Diseases of the Eye.**—Clinical teaching in the Out-Patient rooms daily except Saturday (Time Table p. 20). Clinical Lectures or Ophthalmoscopic Demonstrations weekly.

## DAYS AND HOURS FOR SURGICAL OPERATIONS.

|                          | Mon. | Tues. | Wed. | Thurs. | Fri. | Sat. |
|--------------------------|------|-------|------|--------|------|------|
| Surgical Operations..... | 2.0  | 2.0   | 2.0  | 2.0    | 2.0  | 2.0  |
| Gynæcological „ .....    | —    | —     | —    | 2.0    | —    | —    |
| Ophthalmic „ .....       | —    | —     | —    | 2.0    | —    | —    |

## DAYS OF ATTENDANCE OF THE ANÆSTHETISTS.

| Departments.                                                                           | Mon.                    | Tues.                 | Wed.        | Thurs.                    | Fri.     | Sat.        |
|----------------------------------------------------------------------------------------|-------------------------|-----------------------|-------------|---------------------------|----------|-------------|
| <i>Operating Theatre.</i><br>Mr. CLUTTON<br>Mr. ANDERSON<br>Mr. PITTS .....<br>Mr. ... |                         | Dr. Low               | Mr. Tyrrell |                           | A. H. S. |             |
|                                                                                        | Mr. Crouch              |                       | Dr. Morris  | A. H. S.                  |          |             |
|                                                                                        |                         | A. H. S.              |             |                           | Dr. Low  | Mr. Tyrrell |
|                                                                                        | A. H. S.                |                       |             | Mr. Crouch                |          | Dr. Morris  |
| GYNÆCOLOGICAL<br>WARD .....                                                            |                         |                       |             | Dr. Morris<br>Mr. Tyrrell |          |             |
| EYE DEPARTMENT                                                                         |                         |                       |             |                           |          |             |
| EAR DEPARTMENT                                                                         | 3 p.m.<br>Dr. Low       |                       |             |                           |          |             |
| THROAT DEPART-<br>MENT .....                                                           | 9.30 a.m.<br>Mr. Crouch |                       |             |                           |          |             |
| DENTAL DEPART-<br>MENT .....                                                           |                         | 10 a.m.<br>Mr. Crouch |             |                           |          |             |

**Diseases of the Skin.**—Clinical instruction by Mr. ANDERSON on Fridays.

**Diseases of the Throat.**—Clinical instruction by Mr. ROBINSON on Thursdays. During the Winter Session a short course of Clinical Lectures is given to senior students. Operations in this Department are performed on Monday mornings at 9.30.

**Diseases of the Ear.**—Clinical instruction by Mr. BALLANCE on Mondays. During the Winter Session Mr. BALLANCE gives a short course of Lectures to senior students.

**Mental Diseases.**—Clinical instruction by Dr. RAYNER on Thursdays.

**Diseases of the Teeth.**—Mr. TRUMAN and Assistant give instruction in Dental Surgery on Tuesdays and Fridays.

**Vaccination** is taught practically by Dr. CORY, who is authorised by the Local Government Board to give certificates of proficiency in Vaccination at St Thomas's Hospital. Fee, One Guinea (see p. 37).

**Electro-Therapeutics.**—Instruction is given by Dr. TURNEY on Thursdays.

**Physical Exercise.**—Instruction is given in the Department on Tuesdays and Fridays.

**Anæsthetics.**—The mode of Administration is taught practically by Mr. TYRRELL, Dr. MORRIS, Dr. LOW, and Mr. CROUCH.

#### POST MORTEM EXAMINATIONS.

|                    | Mon. | Tues. | Wed. | Thurs. | Fri. | Sat. |
|--------------------|------|-------|------|--------|------|------|
| Dr. MACKENZIE..... | 2.0  | —     | —    | 2.0    | —    | —    |
| Dr. TURNEY .....   | —    | —     | 2.0  | —      | —    | 2.0  |
| Dr. PERKINS .....  | —    | 2.0   | —    | —      | 2.0  | —    |

## LECTURES, CLASSES, & DEMONSTRATIONS.

*A complete list of Lecturers and Demonstrators, p. 16.*  
*Time-table of days and hours of Lectures, &c., p. 28.*

### ELEMENTARY BIOLOGY.

MR. PARSONS.

A six months' practical course to meet the requirements of the "Conjoint Board" is held from October to March, and a revision class from May to July.

*Special classes*, for the Preliminary Scientific, are commenced in October for the July examination of the University of London. (Fee, see p. 38.)

### BOTANY.

MR. BENNETT, B.Sc.

A course of lectures on Systematic Botany is given during the Summer Session. It comprises the general principles of the classification of plants, with demonstrations of the characters of all the more important natural orders, especially those of medicinal value. The lectures are illustrated by diagrams and fresh specimens. (Fee, see p. 37.)

*Special classes* for the London University and other examinations commence in October. (Fee, see p. 38.)



**COMPARATIVE ANATOMY.**

MR. PARSONS.

A course of six lectures, especially intended for the primary examination for the Fellowship of the College of Surgeons, is given twice yearly. (Fee, see p. 37.)

**CHEMISTRY AND CHEMICAL PHYSICS.**

MR. DUNSTAN, F.R.S.

LECTURES on Chemistry and Chemical Physics are given three times weekly during the Winter Session, and on Chemistry during the Summer Session. These lectures are fully illustrated by experiments.

A course of Practical Work is commenced in January and is continued during the Summer Session.

These courses include the subject-matter of the various Examining Boards, and are specially arranged to afford the student an insight into the principles of chemical science and their application in Medicine.

A course of Chemical Demonstrations is given in connection with the Lectures on Toxicology and Forensic Medicine.

*Special classes* are held for students preparing for the Preliminary Scientific and Intermediate M.B. Examinations of the University of London, and for the Examinations of other Universities. (Fee, see p. 38.)

*A special course* of Practical Instruction is given in the Laboratory to Candidates for Diplomas in Public Health. (Fee, see p. 37.)

Arrangements may be made for additional Practical Work (Elementary and Advanced) in the Chemical Laboratory at fees which may be ascertained from the Medical Secretary.

**ANATOMY.**

MR. ANDERSON AND MR. MAKINS.

(a) **ELEMENTARY.**—A six months' course, consisting of two lectures and one oral examination weekly, is given for first-year students, dealing with osteology and attachments of muscles and ligaments.

(b) **ADVANCED.**—A six months' course, consisting of three lectures and one oral examination weekly, is given for second-year or more advanced students.

The lectures are illustrated by fresh dissections and preparations.

Classes, conducted partly by examination, partly by demonstration, are held during the latter half of the Winter Session, and deal with those sections of anatomy which cannot be included in the lecture course.

(c) **PRACTICAL.**—During both winter and summer sessions the dissecting room is open for the use of students, and the demonstrators attend daily. A number of stock preparations are displayed in the room, and the others are preserved for use in the tutorial classes.

Tutorial classes are held prior to the January, March and July examinations of the "Conjoint Board," which all candidates are allowed to attend. A verbal test examination is held three weeks prior to the examinations, at which candidates must satisfy the teachers as to their knowledge before obtaining the necessary signatures to their schedules.

*Special classes* in advanced anatomy are conducted by the lecturers and demonstrators for the various University and the Fellowship of the College of Surgeons examinations. (Fee, see pp. 37, 38.)

**PHYSIOLOGY.**

DR. T. GREGOR BRODIE.

A systematic course of lectures is given throughout the Winter and Summer Sessions. As certain portions of the subject are dealt with more fully in some years than in others Students are required to attend the course both in the first and second years.

An elementary tutorial class for first year students is held twice a week during the first part of the Winter Session.

An elementary practical class for second year Students is held in the first half of the Winter Session. An elementary course of Chemical Physiology, also for second year Students, is given in the second half of the Winter Session.

A practical class in Histology is held three mornings a week during the Summer Session, and is attended by first year Students. Each Student is practically instructed in the methods of preparing histological specimens.

Each Student for the purposes of this class must provide himself with a microscope, slides and cover glasses, drawing-book and pencils, box to hold twelve dozen specimens, forceps, scalpel, scissors, section-lifter, mounted needles, and six watch glasses.

A table, cupboard and drawer, chemicals, staining and mounting fluids, &c., are provided for him. A deposit of 10s. is charged for the use of a key and apparatus, and this is repaid at the end of the course if both are returned in proper order.

Tutorial classes in Physiology are held by the Demonstrators prior to the January, April, and July examinations of the "Conjoint Board."

A *special class* in advanced practical Physiology is held twice a week from October to March and consists of two parts. The first half of the course is devoted to the use and study of those instruments and experiments which are fitted to class work. The second half is a course of advanced Chemical Physiology. During this class, demonstrations are given of many experiments which cannot be carried out by the Students themselves. This class is intended for those preparing for University Examinations (Cambridge, London, Oxford), or for the Fellowship of the College of Surgeons. For attendance in this class a special fee of six guineas is charged.

## PHARMACY, PHARMACOLOGY, AND THERAPEUTICS.

DR. MACKENZIE.

Lectures are given three times a week during the Summer Session, the course being specially adapted to the requirements of candidates for the examination of the "Conjoint Board."

This course embraces the actions of the various medicinal agents on the healthy body, and on general morbid conditions.

Demonstrations are given in the Materia Medica Museum by Mr. White and two assistants.

PRACTICAL PHARMACY.—Instruction is given by the Hospital Pharmacist, Mr. E. White, B.Sc., to students requiring it. (Fee, see p. 37.)

*Special classes* are arranged to meet the requirements of—(a) the "Conjoint Board," (b) the intermediate M.B. of the University of London, (c) the first M.B. of Oxford and second of Cambridge.

## MIDWIFERY AND DISEASES OF WOMEN.

DR. CULLINGWORTH.

A systematic course of lectures on Midwifery is delivered during the Summer Session, embracing the physiology and pathology of pregnancy, labour, and the puerperal state, preceded by an account of the anatomy and development of the female pelvis, and of the placenta and foetal membranes.

A short course of Obstetric demonstrations on the model is given by Dr. Tate during the Winter Session.

A course of about twenty lectures on the Diseases of Women is delivered during the Winter Session. The lectures are partly systematic and partly clinical, the subjects varying from year to year.



A class is held by the Obstetric tutor for practical instruction in the mechanism and management of labour and the use of instruments. No student is allowed to attend maternity cases until he has attended this class.

Tutorial Classes are held prior to the January, April, and July Examinations of the "Conjoint Board." The Composition Fee provides for attendance on one series of these Classes only.

### **MEDICINE.**

DR. PAYNE AND DR. SHARKEY.

A systematic course of lectures on the Principles and Practice of Medicine is given three times weekly during the Winter Session.

Clinical lectures on Medicine are given once weekly throughout the Academic year, by the physicians to the Hospital in rotation. The subject of each is advertised beforehand in the Hospital and Medical School.

### **PRACTICAL MEDICINE.**

DR. TURNEY AND DR. TOLLER.

An elementary course of practical instruction in the means of physical diagnosis is held for about a month prior to each quarterly appointment of out-patient clinical clerks; no student can be appointed until he has attended this class, or an equivalent course elsewhere. Instruction is given in the principles and method of examination of the circulatory, respiratory, urinary, digestive, and nervous systems. Tutorial Classes are held prior to the January, April, and July Examinations of the "Conjoint Board." The Composition Fee provides for attendance on one series of these Classes only.

### **SURGERY.**

MR. CLUTTON AND MR. PITTS.

A systematic course of lectures on General and Special Surgery is given three times weekly throughout the Winter Session. The subject, being too extensive for a six months' course, is completed in two Winter Sessions.

Clinical lectures on Surgery are given once weekly throughout the Academic year, by the surgeons to the Hospital in rotation. The subject chosen for each lecture is advertised beforehand in the Hospital and Medical School.

### **PRACTICAL SURGERY.**

MR. BALLANCE AND MR. BATTLE.

During the Summer Session Mr. Battle holds a class once a week, providing special instruction for students about to apply for Out-patient dresserships. It comprises bandaging, the treatment of wounds the use of certain instruments and splints, and the demonstration of surgical landmarks on the living model. No student can be appointed a dresser until he has attended this class.

The Winter Course includes the diagnosis and treatment of fractures and dislocations, application of trusses and tourniquets, minor operations, treatment of hæmorrhage and surgical emergencies, and the completion of the Summer Course on instruments and applied anatomy.

The teachers of practical surgery are assisted by Demonstrators, who supervise the students after each lecture in the various manipulations on the living models provided.

Tutorial classes are held for six weeks prior to the January, April, and July examinations of the "Conjoint Board." These include general surgery, operative surgery, and surgical anatomy, by the teachers and Demonstrator of Practical Surgery; and surgical pathology, by Mr. Shattock. The Composition Fee provides for attendance on one series of these Classes only.



## OPERATIVE SURGERY.

Classes are held by Mr. Ballance previous to the January, April, and July examinations of the "Conjoint Board." The operations are performed by the students, subjects being provided at the expense of the school.

*Special classes* are held at convenient times by Mr. Makins and Mr. Battle, for students preparing for the higher examinations. (Fee, see p. 37.)

## PATHOLOGY, PATHOLOGICAL ANATOMY, AND BACTERIOLOGY.

DR. HAWKINS, DR. TURNEY, AND MR. SHATTOCK.

A course of lectures on General Pathology, Surgical Pathology, and the diseases of special organs is given by Dr. Hawkins, Dr. Turney, and Mr. Shattock throughout the Winter and Summer Sessions. Each lecture is followed by a demonstration, in which the main points are illustrated by microscopical and museum preparations. Illustrative sections for microscopical examination are given to each student for preparation and mounting.

Mr. Shattock's course of lectures deals with morbid growths, with the pathological questions touched upon in the systematic course of Surgery, and with Bacteriology; in the latter subject Students receive practical instruction.

The Demonstrator of Morbid Histology holds occasional classes, in which the microscopical preparations contained in the pathological cabinet are shown and explained.

Students are selected annually to assist the Demonstrator of Morbid Histology.

Post-mortem examinations are performed daily at 2 p.m. by Dr. Mackenzie, Dr. Turney, or Dr. Perkins, and demonstrations given. Students are appointed to act as clerks, and are required to make examinations under the supervision of the demonstrators.

## ELEMENTARY PRACTICAL BACTERIOLOGY.

A short course is given during May and June by Mr. Shattock. (Fee, One Guinea, including materials.)

This course deals with the following subjects:—

1. Apparatus, and Preparation of Media.
2. The inoculation of various Media in Test tubes.
3. The microscopic study of Bacteria by means of the Hanging Drop, and Dry Method.
4. The study and separation of Micro-Organisms by means of Plate-Cultures (Koch and Petri), of Roll- and Shake-Cultures.
5. The inoculation of Tubes from Plate- and Roll-Cultures, the making of Impression Preparations.
6. The staining of Micro-Organisms in sections by Gram's method and others; the Staining of Tubercular Sputum, of the Diphtheria Bacillus, Cholera Spirillum and other important Pathogenic forms.

N.B.—For the Diploma of Public Health this course is followed by a more detailed study of such Pathogenic organisms as those of Typhoid, Cholera, and Diphtheria; the examination of infected animals; and the Bacterial examination of water, air, and soil.

## FORENSIC MEDICINE AND TOXICOLOGY.

DR. CORY AND DR. TURNEY.

A three months' course of lectures is given during the Summer Session, jointly by Dr. Cory and Dr. Turney.

The lectures cover the synopses of the various Examining Boards, and are supplemented in the toxicological section by demonstrations by Dr. Crossley.

## MENTAL DISEASES.

DR. RAYNER.

A three months' course of lectures is given during the Summer Session, comprising Symptomatology, Causation, States and Forms of Disease.

1. Mental Defects—Idiocy, Imbecility, etc.
  2. Mental disorders—(a) States of Mental Depression, Melancholia, etc. ; (b) States of Mental Exaltation, Mania, etc. ; (c) States of Stupor ; (d) States of Chronic Disorder, and Dementia.
  3. Mental disorder in relation to diseases, causes, etc.
    - (a) General paralysis, epilepsy, and other neuroses. (b) Insanities of puberty, adolescence, pregnancy, parturition and lactation ; climacteric and senile insanities. (c) Insanities from injury, heat-stroke, fevers, etc. (d) Insanities from alcohol, lead, and other toxic agencies. (e) Insanity from gout, phthisis, and associated bodily diseases.
  4. General Pathology.
- Clinical Instruction is given by visits to Bethlem Hospital and other institutions for the Insane and Imbecile.

## DISEASES OF THE EYE.

MR. LAWFORD AND MR. FISHER.

A course of about thirty lectures on the principal disorders and diseases of the Eye and its appendages is given during the Winter Session. Patients are frequently shown, or illustrative cases described. A lecture or demonstration of cases is given weekly during the Summer Session.

An elementary class for learning the use of the Ophthalmoscope is held in October, January, and May. Ophthalmoscopic cases are shown once a week during the Winter Session.

Oral classes and demonstrations are held in connection with the Surgical tutorial classes for the examinations of the "Conjoint Board."

*A Special Course* of operations on the dead subject is given by Mr. Fisher. (Fee, see p. 37.)

## PUBLIC HEALTH.

DR. SEATON.

A course of lectures is given during the Summer Session, including :—

Water, Air, Soil, Food, the Dwelling—in relation to Health and Disease—Infectious and Epidemic Diseases, the principles of preventive measures—Quarantine Isolation—Hospitals, temporary or permanent—Provisions of the Act for Notification of Diseases—The principles of Disinfection and the mode of action of the chief disinfecting agents—Vaccination—Statistics in relation to public health—Statutes relating to public health—The powers and duties of Sanitary Authorities and their officers—Construction and Ventilation of Sewers, methods of sewage disposal and purification—Trades regulated under the Public Health Acts.

The lectures are usually supplemented by Public Health demonstrations, relating to water supply, systems of sewage disposal and purification, establishment and arrangement of Isolation Hospitals, house drainage, &c.

*Special Classes* for the Degree and Diploma in Public Health.—Dr. Seaton is prepared to receive applications, at the commencement of May, from gentlemen who are desirous of acquiring the special knowledge in the Sanitary organisation of large Towns and Counties which is required by the various examining bodies.

Mr. Shattock and Dr. Jenner will give a course of Bacteriology, beginning in May, and Mr. Dunstan will give two courses of laboratory instruction in Physics, Chemistry and Microscopy, beginning, respectively, in October and January.

St. Thomas's Hospital Medical School is one of the institutions recognised by the Universities of Oxford and Cambridge and the Royal Colleges of Physicians and Surgeons for the course of laboratory instruction.

DAYS AND HOURS OF LECTURES AND DEMONSTRATIONS.  
WINTER SESSION.

|                                                                            | Mon.                              | Tues.                             | Wed.                              | Thurs.                            | Fri.                              | Sat.                              | Years of Attendance |
|----------------------------------------------------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|---------------------|
| Elementary Biology, p. 22 .....                                            | —                                 | 12                                | —                                 | 12                                | —                                 | —                                 | 1st Year.           |
| Physics, Chemistry & Practical Chemistry, p. 23 .....                      | —                                 | —                                 | 12                                | —                                 | 12                                | 10.30                             | do                  |
| Descriptive and Surgical Anatomy, p. 23 {                                  | —                                 | 9.30                              | —                                 | 9.30                              | —                                 | 9.30                              | do.                 |
|                                                                            | 9.30                              | —                                 | 9.30                              | —                                 | 9.30                              | 11                                | 2nd Year.           |
| Anatomical Demonstrations, p. 23 .....                                     | 10 $\frac{1}{2}$ —4 $\frac{1}{2}$ | 10 $\frac{1}{2}$ —4 $\frac{1}{2}$ | 10 $\frac{1}{2}$ —4 $\frac{1}{2}$ | 10 $\frac{1}{2}$ —4 $\frac{1}{2}$ | 10 $\frac{1}{2}$ —4 $\frac{1}{2}$ | 10 $\frac{1}{2}$ —1               | 1st & 2nd.          |
| Physiology, p. 23 .....                                                    | 10.45                             | —                                 | 10.45                             | 10.45                             | —                                 | —                                 | do.                 |
| Physiological De- } Oct., Nov., Dec.<br>monstrations, p. 24 } Oct. to Mar. | —                                 | —                                 | 9.30                              | —                                 | 9.30                              | —                                 | 1st Year.           |
|                                                                            | —                                 | 10.45                             | —                                 | —                                 | 10.45                             | —                                 | 2nd Year.           |
| Practical Surgery, p. 25, Oct., Nov., Dec.                                 | —                                 | —                                 | 9                                 | —                                 | —                                 | —                                 | 3rd Year.           |
| Comparative Anatomy (six lectures), p. 23                                  | —                                 | —                                 | 11                                | —                                 | —                                 | —                                 | 3rd Year.           |
| Medicine, p. 25 { 1st and 3rd six weeks<br>{ 2nd and 4th six weeks         | —                                 | 4.30                              | —                                 | 4.30                              | 4                                 | —                                 | } do.               |
|                                                                            | 12.30                             | —                                 | 12.30                             | 4                                 | —                                 | —                                 |                     |
| Surgery, p. 25.....                                                        | 9                                 | —                                 | —                                 | 9                                 | —                                 | 9                                 | do.                 |
| Bacteriology and Surgical Pathology, p. 26                                 | —                                 | —                                 | —                                 | 12.30                             | 12                                | —                                 | do.                 |
| Diseases of Women, p. 24, Oct., Nov., Dec.                                 | —                                 | 9                                 | —                                 | —                                 | 9                                 | —                                 | 3rd or 4th.         |
| Pathological Anatomy (Practical), p. 26                                    | —                                 | —                                 | —                                 | —                                 | —                                 | 11 $\frac{1}{2}$ —1 $\frac{1}{2}$ | do.                 |
| Diseases of the Eye, { Oct., Nov., Dec.<br>p. 27..... { Jan., Feb., Mar.   | 4                                 | —                                 | —                                 | —                                 | 5                                 | —                                 | do.                 |
|                                                                            | 4                                 | —                                 | —                                 | —                                 | —                                 | —                                 | do.                 |
| Obstetric Demonstrations (six), p. 24.....                                 | —                                 | —                                 | 4.30                              | —                                 | —                                 | —                                 | do.                 |

## SUMMER SESSION.

|                                             | Mon. | Tues. | Wed. | Thurs. | Fri. | Sat.                | Years       |
|---------------------------------------------|------|-------|------|--------|------|---------------------|-------------|
| Botany, p. 22.....                          | —    | 10    | 10   | —      | —    | —                   | 1st Year.   |
| Elementary Biology, p. 22 .....             | 2    | —     | 2    | —      | —    | —                   | do.         |
| Practical Pharmacy (Demonstration), p. 24   | —    | —     | —    | 2      | —    | —                   | do.         |
| Chemistry and Practical Chemistry, p. 23    | 11—1 | —     | —    | —      | 10—1 | 11—12 $\frac{1}{2}$ | do.         |
| Physiology, p. 23..... { Lecture .....      | —    | 10    | 10   | 10     | —    | —                   | do.         |
|                                             | —    | 11—1  | 11—1 | 11—1   | —    | —                   | do          |
| Anatomical Demonstrations, p. 23 .....      | 11—4 | 11—4  | 11—4 | 11—4   | 11—4 | 11—1                | 2nd Year.   |
| Midwifery, p. 24.....                       | —    | 9     | 9    | 9      | 9    | —                   | do.         |
| Comparative Anatomy (six lectures), p. 23   | —    | —     | —    | —      | 2    | —                   | do.         |
| Practical and Manipulative Surgery, p. 25   | 9    | —     | —    | —      | —    | —                   | do.         |
| Pathological Anatomy, p. 26.....            | —    | —     | 12   | —      | 12   | —                   | 3rd Year.   |
| Do. Demonstration, p. 26 .....              | —    | —     | —    | —      | —    | 11                  | do.         |
| Forensic Medicine, p. 26 .....              | 4    | —     | —    | 4      | —    | 9                   | do.         |
| Mental Diseases, p. 26 .....                | —    | —     | —    | 12.30  | —    | —                   | do.         |
| Public Health and Sanitary Science, p. 27   | 12   | —     | —    | —      | —    | —                   | do.         |
| Pharmacology and Therapeutics, p. 24 ...    | —    | —     | 4.30 | —      | 4.30 | 12                  | do.         |
| Diseases of the Eye, p. 27.....             | —    | 4.30  | —    | —      | —    | —                   | 3rd or 4th. |
| Practical Bacteriology(six meetings), p. 26 | —    | —     | —    | 12     | —    | —                   | do.         |

*Clinical Lectures in Medicine and Surgery are given every Wednesday throughout the Sessions, at 2 p.m. and 9.30 a.m. respectively.*



## SCHOLARSHIPS, PRIZES, APPOINTMENTS, & HONORARY DISTINCTIONS.

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### OPEN SCHOLARSHIPS IN NATURAL SCIENCE.\*

As an inducement to the study of Natural Science before the commencement of the strictly Medical Course, two Scholarships, of the value of £150 (*i.e.*, a free admission) and £60 respectively, are awarded annually, after an examination in Physics, Chemistry, and either Botany, Zoology or Physiology at the option of Candidates. The Medical School Committee is empowered to grant an Exhibition of £20 to any *unsuccessful* competitor who obtains sufficient marks to qualify for a Scholarship.

These Scholarships are open to all Students not exceeding 24 years of age who have passed a recognised Preliminary Examination in Arts, and have not yet attended Lectures on Anatomy of the first year, without any condition as to their becoming Students of the Hospital, except in the case of successful Candidates, who must enter at once for the full curriculum. The Examination will be conducted by means of written papers and practical work, and will be held on the 28th, 29th, and 30th of September, 1898. The standard, so far as the subjects are the same, will be that of the Preliminary Scientific Examination for Honours of the University of London. Competitors are required to send in their names with choice of optional subject and Certificate of Birth and of Preliminary Examination to the Medical Secretary not later than September 19th.

### SCHOLARSHIP IN ANATOMY, PHYSIOLOGY & CHEMISTRY.\*

A Scholarship of the value of £50 will be offered for competition in the last week of September. It is open to Students who have completed their examinations in Anatomy, Physiology, and Materia Medica and Pharmacy for a Medical Degree in any of the Universities of the United Kingdom, and have not entered as Students in any London Medical School.

### THE WILLIAM TITE SCHOLARSHIP.

This Scholarship, founded by the late Sir W. TITE, C.B., M.P., F.R.S., of the value of £27 10s., is awarded each year to the Student placed highest in the 1st Class List in the examinations at the end of the first Winter Session. Preference, in case of equality between Students, is to be given to the son of a medical man, and more particularly of one who has been educated at St. Thomas's Hospital or is in Practice in Bath.

### THE MUSGROVE SCHOLARSHIP.

This Scholarship, founded by Sir JOHN MUSGROVE, Bart., the late President of the Hospital, of the value of £38 10s., is awarded biennially to the Student who shall take the highest place in the 1st Class List in the examinations at the end of the Second Winter Session. It is tenable for two years, provided the holder obtains a place in the 1st Class in the Examinations at the end of the third winter.

### THE PEACOCK SCHOLARSHIP.

This Scholarship, founded by the will of the late Dr. THOMAS BEVILL PEACOCK, for many years Physician, and at the time of his death Consulting Physician to St. Thomas's Hospital, is of the same value as the Musgrove Scholarship; is awarded and held upon the same terms; and is given every second year in alternation with that Scholarship.

### THE BEANEY SCHOLARSHIP.

This Scholarship, founded by the will of the late Dr. BEANEY, of the value of £50, is awarded biennially, after an examination in Surgery and Surgical Pathology, to a student who shall have completed his fifth but not his seventh year. The examination is held during the Summer Session.

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\* The Examination Papers of last year may be had on application to the Medical Secretary.

## THE SALTERS' COMPANY RESEARCH FELLOWSHIP.

This Fellowship of the annual value of £100 has been established and endowed by the Salters' Company, with a view to the promotion of research in Pharmacology. The Fellowship is awarded to a properly qualified person by the Company on the nomination of the Treasurer of St. Thomas's Hospital and a Committee of Selection. It may be held for a term of three years, the Fellow carrying on his researches at St. Thomas's Hospital and giving annual evidence of the performance of satisfactory work to the Committee of Selection. The Fellow is required to devote his whole time to research and to hold no other office or appointment except by special permission of the Salters' Company, granted on the strong recommendation of the Committee of Selection.

## PRIZES.

The following Scholarships, Prizes, and Medals, will be offered for Competition during the year 1898-1899:—

TWO OPEN SCHOLARSHIPS IN NATURAL SCIENCE of the value of £150 and £60 respectively, at the commencement of the 1st year.

ONE OPEN SCHOLARSHIP IN ANATOMY, PHYSIOLOGY AND CHEMISTRY of the value of £50, at the commencement of the 3rd year.

### AT THE END OF FIRST YEAR.

|                |      |     |                              |     |     |          |
|----------------|------|-----|------------------------------|-----|-----|----------|
| <i>Winter.</i> | 1st. | ... | The William Tite Scholarship | ... | ... | £27 10s. |
|                | 2nd. | ... | College Prize                | ... | ... | £20.     |
|                | 3rd. | ... | Ditto                        | ... | ... | £10.     |
| <i>Summer.</i> | 1st. | ... | College Prize                | ... | ... | £15.     |
|                | 2nd. | ... | Ditto                        | ... | ... | £10.     |

### SECOND YEAR.

|                |      |     |                          |     |     |          |
|----------------|------|-----|--------------------------|-----|-----|----------|
| <i>Winter.</i> | 1st. | ... | The Musgrove Scholarship | ... | ... | £38 10s. |
|                | 2nd. | ... | College Prize            | ... | ... | £20.     |
|                | 3rd. | ... | Ditto                    | ... | ... | £10.     |
| <i>Summer.</i> | 1st. | ... | College Prize            | ... | ... | £15.     |
|                | 2nd. | ... | Ditto                    | ... | ... | £10.     |

### THIRD YEAR.

Second Tenure of the Peacock Scholarship (if holder obtains 1st Class in this examination) ...

|                |      |     |               |     |          |
|----------------|------|-----|---------------|-----|----------|
|                |      |     |               |     | £38 10s. |
| <i>Winter.</i> | 1st. | ... | College Prize | ... | £20.     |
|                | 2nd. | ... | Ditto         | ... | £15.     |
|                | 3rd. | ... | Ditto         | ... | £10.     |
| <i>Summer.</i> | 1st. | ... | College Prize | ... | £15.     |
|                | 2nd. | ... | Ditto         | ... | £10.     |

Students of each year are classed according to their respective merits in the examinations, and those in the *first* class in each year receive Certificates of Honour, and a preference in the selection for Hospital Appointments.

Free Scholarships are given to distinguished Pupils of Merchant Taylors and City of London Schools, and Epsom College.

In addition there are awarded—

THE CHESELDEN MEDAL, *Annually.*

THE MEAD MEDAL, *do.*

THE SOLLY MEDAL AND PRIZE, *Biennially.* (1900.)

THE BEANEY SCHOLARSHIP, *do.* (1900.)

THE SUTTON SAMS MEMORIAL PRIZE, *Biennially* (1900.)

THE GRAINGER TESTIMONIAL PRIZE, *Annually.*

THE TREASURER'S GOLD MEDAL, *do.*

THE BRISTOWE MEDAL, *do.*

THE WAINWRIGHT PRIZE FOR MEDICINE.

THE HADDEN PRIZE.

Intending Competitors, especially those who have spent a part of their curriculum elsewhere, should apply to the Medical Secretary for detailed regulations.



The CHESELDEN MEDAL, founded by the late GEORGE VAUGHAN, Esq., is annually awarded to the Fifth Year's Student who most distinguishes himself in respect of a Special Practical Examination in Surgery and Surgical Anatomy.

The MEAD MEDAL, founded by Mr. and Mrs. NEWMAN SMITH, is awarded annually to a Fifth Year's Student, in respect of a Special Practical Examination in Medicine, Pathology and Hygiene.

The SOLLY MEDAL, together with a Prize in Money, will be awarded biennially. Those Students are eligible to compete who shall be of from three to six years' standing. The award is made for the best series of Reports of Surgical cases coming under the Student's personal observation in the Wards, not, however, to exceed ten in number.

The BRISTOWE MEDAL will be awarded annually in respect of a special Practical Examination in Pathology and Morbid Anatomy.

The GRAINGER TESTIMONIAL PRIZE, of the value of Fifteen Pounds, is awarded annually for work in Anatomy and Physiology. The conditions of competition for this Prize have recently been altered, and can be learnt from the Medical Secretary.

The SUTTON SAMS MEMORIAL PRIZE, awarded biennially for the best series of Reports of Cases in Obstetric Medicine, including Midwifery and the Diseases of Women.

The TREASURER'S GOLD MEDAL for General Proficiency and Good Conduct, is awarded at the end of the 5th Winter Session to the Student who has passed through his pupilage in St. Thomas's Hospital in the most meritorious manner (printed regulations are posted in the Library).

### APPOINTMENTS.\*

A RESIDENT ASSISTANT PHYSICIAN and a RESIDENT ASSISTANT SURGEON, at a salary of £100 per annum each, are from time to time appointed. The appointments are annual, but the tenure of office may be renewed for a term not exceeding three years.

TWO HOSPITAL REGISTRARS, at an annual Salary of £100 each, are appointed in each year. They are eligible for annual re-appointment, but may not hold office for more than three years. Preference will be given to Gentlemen who have been distinguished for merit, and have completed their studies in the School. The payment of the Registrars is subject to the presentation of a Report upon the Practice of the Hospital, and to such Report being regarded as satisfactory by the Medical Officers to whom it shall have been referred.

AN OBSTETRIC TUTOR AND REGISTRAR is appointed each year, at an annual salary of £50. He is eligible for annual re-appointment, but may not hold office for more than three years consecutively. The holder of the office takes part in the tutorial instruction of students, under the direction of the Obstetric Physician.

**House Appointments, open to Students who have obtained their diplomas.** (*The duties of these offices commence on the first Tuesday in March, June, September, and December.*)

Four HOUSE PHYSICIANS, Four HOUSE SURGEONS, and Four ASSISTANT HOUSE SURGEONS, are selected every three months. The Assistant House Surgeons are non-resident, but the other Officers are provided with Rooms and Commons in the Hospital, free of expense.

A SENIOR and a JUNIOR OBSTETRIC HOUSE PHYSICIAN are selected every three months. The former is provided with Rooms and Commons in the Hospital, free of expense. The latter is provided with Commons, and must live near the Hospital.

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\* All these Appointments are open to Students without extra payment.



TWO OPHTHALMIC HOUSE SURGEONS, Senior and Junior, are appointed for six months, one of whom receives a Salary at the rate of £50 per annum, and the other is provided with Commons. They must live near the Hospital.

CLINICAL ASSISTANTS in the Departments for Diseases of the Throat, Skin, and Ear, and in the Electrical Department, are appointed every three months.

In the Special Departments preference is given to those who have worked in a satisfactory manner therein as Clinical Clerks and Dressers.

### Appointments for Un-qualified Students.

CLINICAL CLERKS and DRESSERS to In-patients are selected to the number of at least 100 each year, from amongst the most eligible pupils. The DRESSER on Accident Duty is provided with a Room and Commons in the Hospital. CLINICAL CLERKS and DRESSERS for the Out-patients are also appointed, to the number of at least 80 to 100 each year; applicants are required to have passed the 2nd examination of the Conjoint Board, or an equivalent examination, and to have attended a course of instruction in Elementary Clinical Medicine (p. 25). (*The Duties commence on the first Tuesday in January, April, July, and October.*)

OBSTETRIC CLERKS are appointed, in rotation, from a list of Students who have entered their names for the purpose, have attended Lectures on Midwifery and a course of Elementary Practical Obstetrics, and have passed the "Second Conjoint," or an equivalent Examination. Each Clerk holds office for three weeks, and Special Certificates are awarded to those Gentlemen who have satisfactorily attended Sixty Maternity cases. About 50 Obstetric Clerks are appointed yearly.

ASSISTANTS TO THE TEACHERS OF PRACTICAL AND MANIPULATIVE SURGERY are appointed for the Winter and Summer Sessions.

ASSISTANTS TO THE LECTURER ON MATERIA MEDICA are appointed for the Summer Session.

Students are appointed to act as ASSISTANTS in the CLINICAL LABORATORY and to the DEMONSTRATORS of MORBID HISTOLOGY and of MORBID ANATOMY.

ASSISTANTS IN THE CHEMICAL DEPARTMENT are selected from those who have passed the PREL. SCI. UNIV. LOND. or who are similarly qualified.

ASSISTANTS IN THE PHYSIOLOGICAL LABORATORY are selected from Students who have completed their Second Winter Session.

ANATOMICAL REGISTRARS and PROSECTORS are appointed in the early part of the Winter Session, also ASSISTANTS TO THE LECTURER ON ELEMENTARY BIOLOGY.

### REGULATIONS FOR THE EXAMINATION AND CLASSIFICATION OF THE STUDENTS AT THE MEDICAL SCHOOL.

1. In accordance with the Regulations of the Qualifying Bodies, Students must attend the Class Examinations in the subjects for which they have to be certified, and show by their answers to the questions that they have paid proper attention to the Lectures, otherwise the signature to their Schedules may be withheld.

2. There shall be held at least two Examinations in each Winter and one in each Summer Session in each subject on which attendance is required during that Session, and the marks obtained in these Examinations shall be the basis for the Classification of Students and the Award of Prizes for each Session respectively. Provided that any extra Examination in the course of the Session, in any subject, be not allowed to interfere with the ordinary Lectures in other subjects.

3. The number of marks allotted to each subject in the following Schedule is not to be exceeded in case the number of Examinations held during the Session be more than two, but must be distributed amongst the several Examinations.

## 1st YEAR'S SUBJECTS.

|            |                             |      |
|------------|-----------------------------|------|
| WINTER ... | Anatomy ... ..              | 500  |
|            | Practical Anatomy ... ..    | 300  |
|            | Physiology ... ..           | 300  |
|            | Elementary Biology ... ..   | 300  |
|            | Chemistry and Practical     |      |
|            | Chemistry ... ..            | 600  |
|            | Total ... ..                | 2000 |
| SUMMER ... | Chemistry and Practical     |      |
|            | Chemistry ... ..            | 300  |
|            | Practical Pharmacy... ..    | 200  |
|            | Practical Physiology ... .. | 300  |
|            | Total ... ..                | 800  |

## 2nd YEAR'S SUBJECTS.

|            |                             |      |
|------------|-----------------------------|------|
| WINTER ... | Anatomy ... ..              | 500  |
|            | Practical Anatomy ... ..    | 300  |
|            | Physiology ... ..           | 600  |
|            | Practical Physiology ... .. | 200  |
|            | Total ... ..                | 1600 |
| SUMMER ... | Midwifery ... ..            | 500  |
|            | Practical Surgery ... ..    | 200  |
|            | Total ... ..                | 700  |

## 3rd YEAR'S SUBJECTS.

|            |                          |      |
|------------|--------------------------|------|
| WINTER ... | Medicine ... ..          | 650  |
|            | Surgery ... ..           | 650  |
|            | Practical Surgery ... .. | 300  |
|            | Total ... ..             | 1600 |

|            |                             |      |
|------------|-----------------------------|------|
| SUMMER ... | Forensic Medicine ... ..    | 200  |
|            | Pathological Anatomy ... .. | 350  |
|            | Pharmacology and            |      |
|            | Therapeutics... ..          | 250  |
|            | Mental Diseases and         |      |
|            | Public Health... ..         | 200  |
|            | Total ... ..                | 1000 |

4. Students must obtain at least one-third of the total number of marks in each subject, and not less than two-thirds of the total number allotted to all the subjects collectively, to be placed in the 1st Class.

Those who have obtained one-third of the total number of marks allotted to all the subjects collectively are placed in the 2nd Class.

The names of those who do not obtain either a 1st or 2nd Class position are not published, but a General List showing the exact position of each Student at every Examination is kept by the Secretary, from whom any Student can learn his own position, but no Lecturer shall make known to Students the number of marks obtained by any Student in any subject.

5. The Prizes shall be awarded to the Students holding the 1st, 2nd, and 3rd positions in the 1st Class of each Winter Session, and to those holding the 1st and 2nd positions of the 1st Class in each Summer Session.

6. The number of marks allotted to the Examinations for the MEAD and CHESELDEN Medals shall be 600 each.

7. In awarding the TREASURER'S Medal the number of marks obtained at the Sessional Examinations and in the MEAD and CHESELDEN Examinations shall be counted, provided that, as regards the Examination for the Medals, two-thirds of the maximum marks be obtained, but those obtained in the Entrance Scholarship Competition shall not be included.

8. The Authorities reserve the right of withholding any prize, if no competitor of sufficient merit present himself.

## Distribution of Prizes for the Past Sessions.

### SUMMER SESSION, 1897.

#### FIRST YEAR'S STUDENTS.

|                                                 |                                                     |
|-------------------------------------------------|-----------------------------------------------------|
| C. N. SEARS, <i>Wimbledon Park</i> ... ..       | { College Prize, £15,<br>and Certificate of Honour. |
| A. B. LINDSEY, <i>Finsbury Park Road</i> ... .. | { College Prize, £10,<br>and Certificate of Honour. |

#### SECOND YEAR'S STUDENTS.

|                                       |                                                     |
|---------------------------------------|-----------------------------------------------------|
| A. D. JAMESON, <i>Eltham</i> ... ..   | { College Prize, £15,<br>and Certificate of Honour. |
| H. R. BATEMAN, <i>Mandalay</i> ... .. | { College Prize, £10,<br>and Certificate of Honour. |

## THIRD YEAR'S STUDENTS.

|                                           |     |     |     |                                                     |
|-------------------------------------------|-----|-----|-----|-----------------------------------------------------|
| J. GAFF, <i>Kennington Road</i>           | ... | ... | ... | { College Prize, £15,<br>and Certificate of Honour. |
| H. T. D. ACLAND, <i>Carlisle Mansions</i> | ... | ... | ... | { College Prize, £10,<br>and Certificate of Honour. |

## WINTER SESSION, 1897-8.

## ENTRANCE SCIENCE SCHOLARSHIPS.

|                                       |     |     |     |                                                          |
|---------------------------------------|-----|-----|-----|----------------------------------------------------------|
| W. H. HARWOOD-YARRED, <i>Brixton</i>  | ... | ... | ... | { First Scholarship, £150,<br>and Certificate of Honour. |
| F. H. WHITEHEAD, <i>Lavender Hill</i> | ..  | ... | ... | { Scholarship, £60,<br>and Certificate of Honour.        |

## UNIVERSITY SCHOLARSHIP.

|                           |     |     |     |     |                                                   |
|---------------------------|-----|-----|-----|-----|---------------------------------------------------|
| F. C. EVE, <i>Bedford</i> | ... | ... | ... | ... | { Scholarship, £50,<br>and Certificate of Honour. |
|---------------------------|-----|-----|-----|-----|---------------------------------------------------|

## FIRST YEAR'S STUDENTS.

|                                      |     |     |     |     |                                                                        |
|--------------------------------------|-----|-----|-----|-----|------------------------------------------------------------------------|
| W. H. HARWOOD-YARRED, <i>Brixton</i> | ... | ... | ... | ... | { The Wm. Tite Scholarship,<br>£27 10s.,<br>and Certificate of Honour. |
| J. E. ADAMS, <i>Islington</i>        | ... | ... | ... | ... | { College Prize, £20,<br>and Certificate of Honour.                    |
| O. MILLS, <i>Whitby</i>              | ... | ... | ... | ... | { College Prize, £10,<br>and Certificate of Honour.                    |
| C. U. IND, <i>Margate</i>            | ... | ... | ... | ... | Certificate of Honour.                                                 |

## SECOND YEAR'S STUDENTS.

|                                          |     |     |     |     |                                                                       |
|------------------------------------------|-----|-----|-----|-----|-----------------------------------------------------------------------|
| C. N. SEARS, <i>Wimbledon Park</i>       | ... | ... | ... | ... | { The Peacock Scholarship,<br>£38 10s.,<br>and Certificate of Honour. |
| A. F. MISKIN, <i>Kennington Road</i>     | ... | ... | ... | ... | { College Prize, £20,<br>and Certificate of Honour.                   |
| A. B. LINDSEY, <i>Finsbury Park Road</i> | ... | ... | ... | ... | { College Prize, £10,<br>and Certificate of Honour.                   |

## PRACTICAL MEDICINE

|                                        |     |     |     |     |                                                            |
|----------------------------------------|-----|-----|-----|-----|------------------------------------------------------------|
| E. F. BUZZARD, <i>Grosvenor Street</i> | ... | ... | ... | ... | { The Mead Medal, founded by<br>Mr. and Mrs. NEWMAN SMITH. |
|----------------------------------------|-----|-----|-----|-----|------------------------------------------------------------|

## SURGERY AND SURGICAL ANATOMY.

|                                      |     |     |     |     |                                                                       |
|--------------------------------------|-----|-----|-----|-----|-----------------------------------------------------------------------|
| S. O. BINGHAM, <i>Alfreton</i>       | ... | ... | ... | ... | { The Cheselden Medal,<br>founded by the late GEORGE<br>VAUGHAN, Esq. |
| S. A. LUCAS, <i>Tunbridge Wells</i>  | ... | ... | ... | ... | Certificate of Honour.                                                |
| H. D. SINGER, <i>Stoke Newington</i> | ... | ... | ... | ... | Certificate of Honour.                                                |

## PATHOLOGY AND MORBID ANATOMY.

|                                          |     |     |     |     |                     |
|------------------------------------------|-----|-----|-----|-----|---------------------|
| A. W. SIKES, <i>Garrycloyne, Blarney</i> | ... | ... | ... | ... | The Bristowe Medal. |
|------------------------------------------|-----|-----|-----|-----|---------------------|

## GRAINGER TESTIMONIAL PRIZE.

|                             |     |     |     |     |                        |
|-----------------------------|-----|-----|-----|-----|------------------------|
| R. BEER, <i>Bickley</i>     | ... | ... | ... | ... | Prize, £15.            |
| E. M. CORNER, <i>Poplar</i> | ... | ... | ... | ... | Certificate of Honour. |

## FOR REPORTS OF SURGICAL CASES.

|                                      |     |     |     |     |                            |
|--------------------------------------|-----|-----|-----|-----|----------------------------|
| C. W. PILCHER, <i>Boston, Lincs.</i> | ... | ... | ... | ... | The Solly Medal and Prize. |
|--------------------------------------|-----|-----|-----|-----|----------------------------|

## FOR GENERAL PROFICIENCY AND GOOD CONDUCT.

|                              |     |     |     |     |                             |
|------------------------------|-----|-----|-----|-----|-----------------------------|
| H. E. HEWITT, <i>Croydon</i> | ... | ... | ... | ... | The Treasurer's Gold Medal. |
|------------------------------|-----|-----|-----|-----|-----------------------------|

## CERTIFICATES OF HONOUR.

## HOUSE PHYSICIANS.

H. C. JONAS  
C. G. SELIGMANN  
W. McDougall  
H. N. GOODE

H. E. HEWITT  
R. H. BELL  
H. H. SCOTT  
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|                   |                 |                   |
|-------------------|-----------------|-------------------|
| W. H. J. PATERSON | S. N. BABINGTON | J. S. HALL        |
| A. W. TUKE        | J. F. McCLEAN   | H. H. SANGUINETTI |
| L. GILBERT        | H. J. MARRIAGE  |                   |

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|----------------|-------------------|------------------|
| J. F. McCLEAN  | H. H. SANGUINETTI | F. L. A. GREAVES |
| H. J. MARRIAGE | E. H. COBB        | A. H. GREG       |
| J. S. HALL     | A. C. ROBINSON    |                  |

**OBSTETRIC HOUSE PHYSICIANS.**

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| <i>Senior</i> —J. B. TOMBLESON | <i>Junior</i> —J. P. SCATCHARD |
| J. S. FAIRBAIRN                | G. D. HINDLEY                  |
| G. D. HINDLEY                  | S. D. TURNER                   |
| S. D. TURNER                   | H. T. M. ALFORD                |

**OPHTHALMIC HOUSE SURGEONS.**

|                  |                 |
|------------------|-----------------|
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|------------------|-----------------|

**CLINICAL ASSISTANTS IN THE SPECIAL DEPARTMENTS.**

|                    |            |              |              |
|--------------------|------------|--------------|--------------|
| Throat             | Skin       | Ear          | Electrical   |
| J. A. A. ROUILLARD | E. STAINER | W. D. FRAZER | A. H. GIBBON |
| A. J. GRANT        | E. H. COBB | F. R. MARTIN |              |

**CERTIFICATES OF PROFICIENCY.****ANATOMICAL REGISTRARS.**

|                |               |
|----------------|---------------|
| C. A. R. NITCH | H. R. BATEMAN |
|----------------|---------------|

**PROSECTORS.**

|                |                |
|----------------|----------------|
| J. J. ARMITAGE | H. J. DE BRENT |
| N. CARPMAEL    | C. N. SEARS    |

**ASSISTANTS IN THE PHYSIOLOGICAL LABORATORY.**

|                 |               |
|-----------------|---------------|
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| S. HUNT         | H. S. STANNUS |

**ASSISTANTS IN THE PATHOLOGICAL LABORATORY.**

|                 |             |              |
|-----------------|-------------|--------------|
| A. BEVAN        | J. GAFF     | A. W. JONES  |
| S. O. BINGHAM   | E. A. GATES | J. M. OLIVEY |
| W. J. E. DAVIES |             |              |

**ASSISTANTS IN THE BIOLOGICAL LABORATORY.**

|                      |          |
|----------------------|----------|
| W. H. HARWOOD-YARRED | O. MILLS |
|----------------------|----------|

**ASSISTANTS TO THE LECTURER ON MATERIA MEDICA.**

|          |             |
|----------|-------------|
| A. BEVAN | H. H. SCOTT |
|----------|-------------|

**ASSISTANTS TO THE TEACHERS OF PRACTICAL SURGERY.**

|              |                  |                |
|--------------|------------------|----------------|
| J. A. BARNES | F. L. A. GREAVES | H. J. PHILLIPS |
| R. H. BELL   | S. A. LUCAS      | A. C. ROBINSON |

The following Distinctions in the University of London have been obtained by Students of St. Thomas's Hospital during the past year:—

**HONOURS EXAMINATIONS—UNIV. LOND.**

Third Class in Medicine (M.B.), Mr. B. DYBALL and Mr. A. W. SIKES.  
 First Class in Obstetric Medicine (M.B.), Mr. B. DYBALL  
 Second Class in Obstetric Medicine (M.B.), Mr. A. W. SIKES.  
 Gold Medal in Forensic Medicine (M.B.), Mr. A. W. SIKES.  
 Third Class in Forensic Medicine (M.B.), Mr. R. W. C. PIERCE.  
 Gold Medal and Moiety of Scholarship in Surgery (B.S.), Mr. B. DYBALL.  
 Second Class in Surgery (B.S.), Mr. A. L. HOME.  
 Third Class in Surgery (B.S.), Mr. A. W. SIKES.  
 Second Class in Experimental Physics (B.Sc.), Mr. R. E. ROBERTS.  
 Third Class in Zoology (B.Sc.), Mr. A. B. LINDSEY.

## FEES FOR ATTENDANCE ON THE LECTURES

AND ON THE

## PRACTICE OF THE HOSPITAL.

## COMPOSITION FEES.

The Composition Fee to Hospital Practice and Lectures may be paid in the following ways :

- 1st. One Hundred and Fifty Pounds on entrance in one sum ;
- 2nd. One Hundred and Fifty-seven Pounds Ten Shillings in instalments ;
  - (a) By two payments, £85 on entrance, and £72 10s. at the beginning of the second year ;
  - (b) By three payments, £75 at the beginning of the first year, £50 at the beginning of the second year, and £32 10s. at the beginning of the third year ;
  - (c) By four payments, £65 at the beginning of the first year, £50 at the beginning of the second year, £30 at the beginning of the third year, and £12 10s. at the beginning of the fourth year.

A reduction is made in the case of Students who have passed in Chemistry and Physics or Elementary Biology before entering the Hospital.

Gentlemen entering at St. Thomas's for Lectures and Hospital Practice of the second and subsequent years pay £130 on entrance, or three instalments of £52 10s., £42, and £42 (see page 18). Students entering for Lectures and Hospital Practice of third and subsequent years (see page 18) pay a composition fee of £80, or £52 10s. on entrance, and £31 10s. one year subsequently.

[N.B.—It should be understood that although the Composition Fees are intended to cover unlimited attendance on Lectures and Hospital Practice, yet if a student fail to pass the several professional examinations within periods deemed reasonable by the School authorities, he may be required to pay additional fees for attendance at practical Courses and Tutorial Classes, or his rights as a Student may be suspended or determined at any time by the School Committee, with the approval of the Treasurer.]

Legally qualified Medical Men (British, Colonial, or Foreign), are admitted to the Hospital practice, Clinical Lectures, and Museums of the following Hospitals : Charing Cross, Guy's, King's College, Middlesex, St. George's, St. Mary's, St. Thomas's, University College, and Westminster.

Cards are issued at the following rates : For 3 months, 7 guineas ; for 6 months, 10 guineas ; and for any longer period at the further rate of 5 guineas for each additional 6 months.

The cards do not entitle the holder to certificates of attendance either on Lectures or in Hospital Practice for the purpose of any examination.

---

NOTE.—Cheques may be made payable to the Medical Secretary, and crossed "London and County Bank, Lambeth."

The Fee for attendance on the *general* subjects required of Students in Dental Surgery, is for the two years, £65, or by instalments, £55 for the first year, and £15 for the second year. If certificates for *Dental* practice are also required, the special fee for that subject (see below) has to be paid.

The Courses may be attended separately on the following terms, which entitle to Certificates for such Attendances.

*For the Medical and Surgical Practice, including Clinical Lectures and the Special Departments.*

|                     |         |                  |          |
|---------------------|---------|------------------|----------|
| Three months ... .. | £21.    | Twelve months... | £36 15s. |
| Six months ... ..   | £26 5s. | Unlimited ... .. | £73 10s. |

The Practice of the Medical or Surgical Wards, or any one of the Special Departments, may be attended separately.

|                      | <i>Medical or Surgical.</i> | <i>Each Special Department.</i> |
|----------------------|-----------------------------|---------------------------------|
| Three months ... ..  | £15 15s.                    | £5 5s.                          |
| Six months ... ..    | £21.                        | £10 10s.                        |
| Twelve months ... .. | £26 5s.                     | £15 15s.                        |

*Lectures and Demonstrations.*

|                                                                                     |      |          |
|-------------------------------------------------------------------------------------|------|----------|
| Anatomy, Physiology ... ..                                                          | each | £10 10s. |
| Practical Anatomy (twelve months), Practical Physiology, including Histology ... .. | each | £10 10s. |
| Medicine, Surgery, Chemistry ... ..                                                 | ,,   | £7 7s.   |
| Midwifery ... ..                                                                    | ,,   | £6 6s.   |
| Pharmacology and Therapeutics, Physics, Forensic Medicine                           | each | £5 5s.   |
| Pathology, including Pathological Histology ... ..                                  | ,,   | £8 8s.   |
| Diseases of Women, Public Health, Insanity, Diseases of the Eye ... ..              | each | £3 3s.   |
| Practical Medicine, Practical Obstetrics, Laryngology ... ..                        | ,,   | £3 3s.   |
| Practical Surgery, Practical Chemistry, Elementary Biology                          | ,,   | £6 6s.   |
| Demonstrations in Post-Mortem room (twelve months) ... ..                           | ,,   | £10 10s. |

NOTE.—A small charge for materials is made for all Practical Courses taken separately

**SPECIAL COURSES (not included in the Composition Fee) and EXTRA EXPENSES.**

|                                                                         |             |
|-------------------------------------------------------------------------|-------------|
| Comparative Anatomy ... ..                                              | £2 2s.      |
| Botany ... ..                                                           | £3 3s.      |
| Operative Surgery ... ..                                                | £5 5s.      |
| Ditto of Eye ... ..                                                     | £2 2s.      |
| Advanced Anatomy, Advanced Physiology ... ..                            | each £6 6s. |
| Public Health—Six months' Laboratory Instruction for the Diploma ... .. | £21.        |
| Practical Bacteriology ... ..                                           | £1 1s.      |
| Vaccination ... ..                                                      | £1 1s.      |
| Practical Instruction in Pharmacy ... ..                                | £3 3s.      |
| Attendance at a Fever Hospital of the Metropolitan Asylums Board ... .. | £3 3s.      |
| Attendance at a recognised Lunatic Asylum ... ..                        | £3 3s.      |

Students who pay a Composition Fee are now supplied with chemicals and materials for **one course** of Practical Chemistry, Practical Physiology, and Elementary Biology without extra charge, but there are certain instruments and materials required during the course of study, as follows, viz. :

Those attending Elementary Biology, Practical Physiology and Physiological Demonstrations must provide themselves with Microscopes. Dissecting Instruments are required for the Elementary Biology Course.

Students Dissecting pay for the "parts" they dissect at fixed rates, which are notified in the Library.

Each Clinical Clerk must provide himself with a Stethoscope and Registering Clinical Thermometer. Each Dresser is required to have a Registering Clinical Thermometer, a Pocket Case of Instruments, and a Case of Silver or Plated Catheters.



# UNIVERSITY OF LONDON.

## Preliminary Scientific and Intermediate M.B. Classes.

### PRELIMINARY SCIENTIFIC EXAMINATION.

Special instruction in the subjects required for this Examination is given in the form of (a) Lectures and (b) Classes, from October to July.

|                                                                                                                    | Mon.          | Tues.         | Wed.           | Thu.                  | Fri.           | Sat.                          |
|--------------------------------------------------------------------------------------------------------------------|---------------|---------------|----------------|-----------------------|----------------|-------------------------------|
| Botany.<br>A. W. BENNETT, M.A. { Lectures (Summer)<br>Classes (Winter & Summer)                                    | —<br>—        | 10.0<br>—     | 10.0<br>11.0   | —<br>—                | —<br>—         | —<br>—                        |
| Chemistry.<br>W. R. DUNSTAN, M.A., { Lectures (Winter)<br>Classes (Summer)<br>F.R.S. { Practical (Winter)          | —<br>—<br>—   | —<br>—<br>2.0 | 12.0<br>—<br>— | —<br>12.0<br>—        | 12.0<br>—<br>— | —<br>—<br>10.30<br>fm Jan     |
| „ (Summer)                                                                                                         | 11.0          | 2.0           | —              | —                     | 11.0           | 11.0                          |
| Physics.<br>W. R. DUNSTAN, M.A., { Lectures<br>F.R.S., and { and<br>H. R. LESUEUR, B.Sc. { Practical Work } Winter | 2.0<br>fm Jan | —             | 9.30           | —                     | —              | 10.30<br>Oct.<br>Nov.<br>Dec. |
| „ { } Summer                                                                                                       | —             | —             | 9.0            | 9.0<br>& 2.0          | —              | —                             |
| Zoology.<br>F.G. PARSONS, F.R.C.S. { Classes (Winter)<br>„ (Summer)                                                | —<br>9.30     | —<br>—        | 1.30<br>—      | —<br>10.30            | —<br>—         | —<br>—                        |
|                                                                                                                    |               |               |                | Laboratory open daily |                |                               |

N.B.—A Microscope and simple Dissecting Apparatus must be provided by each Member of the Class, and Two Guineas are charged for materials.

Fee, inclusive of Practical Chemistry ... .. *Sixteen Guineas.*

Fee for any single subject ... .. *Five Guineas.*

Subsequent Courses, half Fee, if recommended by the respective Teachers.

In the Practical Classes of Botany and Zoology, each Student has the opportunity of dissecting the chief types.

### INTERMEDIATE EXAMINATION IN MEDICINE.

|                                                                                                  | Mon.     | Tues.      | Wed.                       | Thurs.                       | Fri.                         | Sat.   |
|--------------------------------------------------------------------------------------------------|----------|------------|----------------------------|------------------------------|------------------------------|--------|
| Anatomy.<br>G. H. MAKINS, { Jan.to Mar.<br>F.R.C.S., and {<br>H. B. ROBINSON, M.S. { May to July | —        | 9.30       | —                          | 9.30                         | —                            | —      |
|                                                                                                  |          | Four       | times a                    | week.                        |                              |        |
| Physiology & Histology<br>T. G. BRODIE, M.D. { Oct.to Mar.<br>Lond. { May to July                | 2—4<br>— | —<br>—     | 2—4<br>—                   | —<br>3.0                     | —<br>—                       | —<br>— |
| Organic Chemistry.*<br>W. R. DUNSTAN, { Jan.to Mar.<br>M.A., F.R.S. { May to July                | —<br>—   | 2.0<br>2.0 | —<br>3.0<br>Practical work | 2.0<br>2.0<br>Practical work | 2.0<br>2.0<br>Revision Class | —<br>— |
| Materia Medica and<br>Pharm. Chemistry.<br>E. WHITE, B.Sc. { May to July                         | —        | —          | 2.0                        | —                            | —                            | —      |

Fee to Students of the Hospital, inclusive of

Organic Analysis and Chemicals ... .. *Nine Guineas.*

To others ditto ... .. *Twelve Guineas.*

Subsequent Courses, half Fee, if recommended by the respective Teachers.

\* Students are strongly advised to attend the lectures in this subject immediately they have passed the Preliminary Scientific Examination, and the lectures, revision classes and practical work in the next year.

NOTE.—Private Classes are held for the Final M.B. Examination.

# St. Thomas's Hospital.

## MEDICAL AND PHYSICAL SOCIETY.

*President, 1898—99.*  
DR. H. G. TURNEY.

*Vice-Presidents.*

DR. ACLAND.  
MR. ANDERSON.  
MR. BATTLE.  
DR. CULLINGWORTH.

MR. LAWFORD.  
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MR. H. T. D. ACLAND.

MR. F. C. EVE.

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MR. E. A. GATES.  
MR. C. L. HAWKINS.  
MR. H. T. D. ACLAND.

MR. H. R. BEALE.  
MR. F. C. EVE.  
MR. C. F. SELOUS.

MR. H. S. STANNUS.  
MR. J. J. ARMITAGE.  
MR. H. J. DE BRENT.

This Society was originated in the early part of the present century by students of the Hospital, and has for its object the reading and discussion of papers on Medicine, Surgery, and subjects of General Interest, the narration of cases, and the exhibition of specimens of Physiological and Pathological interest. The Meetings are held in the Students' Club on alternate Thursdays at 8.30 p.m., and terminate not later than 10 p.m.

Further information can be obtained of the Hon. Secretaries.

## ST. THOMAS'S HOSPITAL REPORTS.

VOL. XXVI., NEW SERIES,

EDITED BY

H. W. G. MACKENZIE, M.A., M.D., Cantab, and  
G. H. MAKINS, F.R.C.S.

*Will be Published in due Course.*

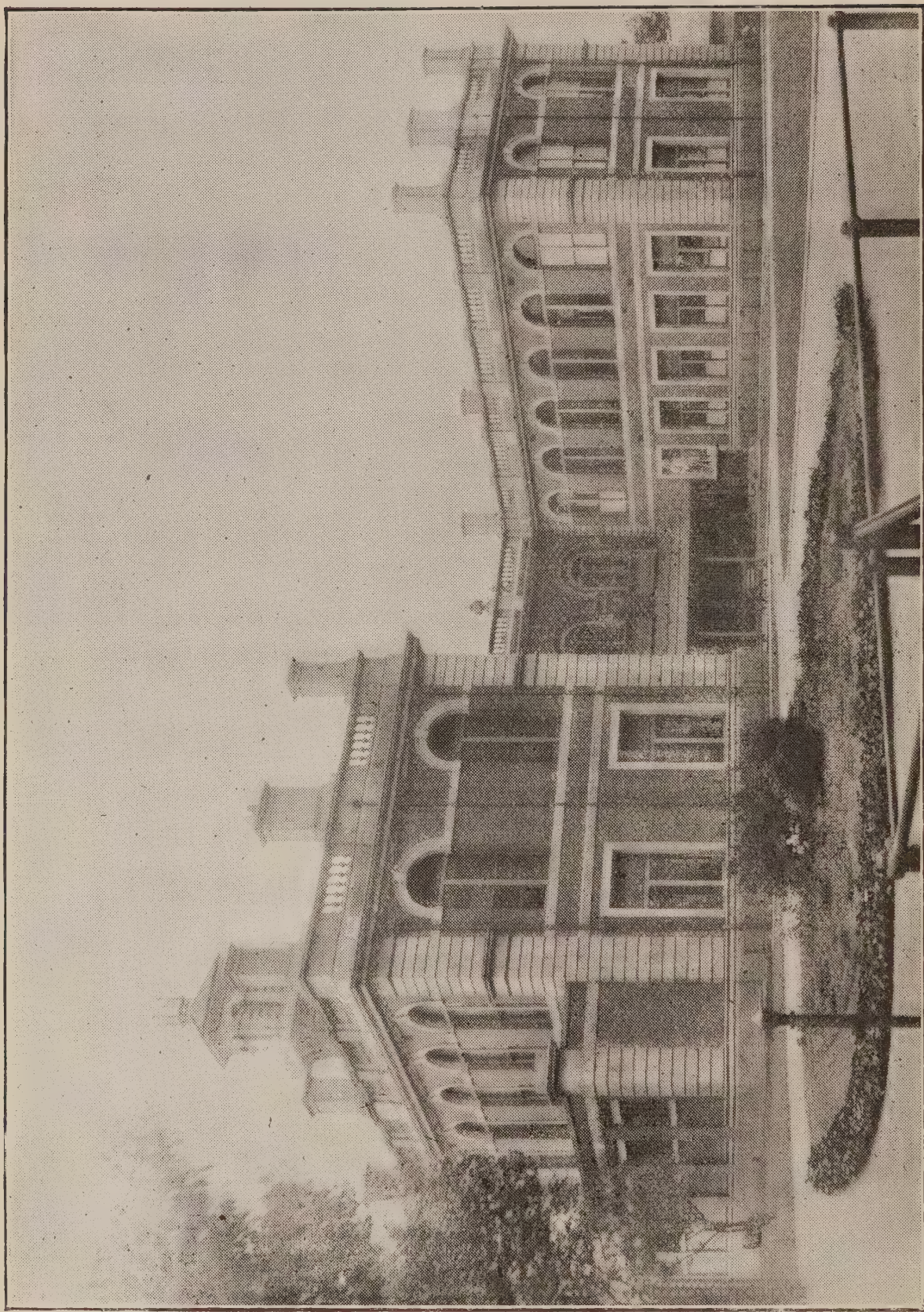
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MEDICAL SCHOOL, NORTH VIEW.

OCTOBER, 1898.

1	S	
2	S	Seventeenth Sunday after Trinity.
3	M	Distribution of Prizes, 3 p.m. Annual Dinner. Last day [for Entry Univ. Lond. M.B. Exam.
4	TU	Clinical Clerks and Dressers commence duty.
5	W	
6	TH	
7	F	Meeting of Library Committee.
8	S	
9	S	Eighteenth Sunday after Trinity.
10	M	
11	TU	
12	W	
13	TH	
14	F	
15	S	
16	S	Nineteenth Sunday after Trinity.
17	M	Univ. Lond. B.Sc. Exam.
18	TU	St. Luke.
19	W	
20	TH	
21	F	
22	S	
23	S	Twentieth Sunday after Trinity.
24	M	
25	TU	
26	W	
27	TH	
28	F	St. Simon and St. Jude.
29	S	
30	S	Twenty-first Sunday after Trinity.
31	M	Univ. Lond. M.B. Exam.

The Registration and Museum Committees meet during this month.

The Primary Examination of the Society of Apothecaries is held Quarterly, in the months of October, January, April, and July. The Final is held monthly; the Surgical part commences on the second Wednesday, and the Medical on the Monday following.

First, Second, and Third Examinations of the Examining Board in England are held this month.

NOVEMBER, 1898.

		<i>Notice</i> —30th, last day for applications for Medical and [Surgical Registrarships.
1	TU	All Saints.
2	W	All Souls. Last day for applications for House Offices, &c.*
3	TH	
4	F	
5	S	
6	S	Twenty-second Sunday after Trinity.
7	M	Entry for M.D. and M.S. Exams. Univ. Lond.
8	TU	
9	W	Meeting to appoint House Officers, &c. Prince of Wales
10	TH	[born, 1841.
11	F	
12	S	
13	S	Twenty-third Sunday after Trinity.
14	M	
15	TU	
16	W	
17	TH	
18	F	
19	S	Univ. Lond. B.Sc. Pass List published.
20	S	Twenty-fourth Sunday after Trinity.
21	M	
22	TU	Univ. Lond. M.B. Pass List published. Last day for [Entry for B.S. Exam., Univ. Lond.
23	W	Univ. Lond. M.B. Honours Exam.
24	TH	
25	F	
26	S	
27	S	Advent Sunday.
28	M	
29	TU	
30	W	St. Andrew. Last day for applications for Medical and [Surgical Registrarships.

Examinations for the Fellowship of the Royal College of Surgeons of England held this month.

** Applications for these appointments to be made on forms to be obtained at the Medical Secretary's Office.*

DECEMBER, 1898.

1	TH	Last day for Entry for Matriculation Univ. Lond.
2	F	
3	S	
4	S	Second Sunday in Advent.
5	M	Univ. Lond. M.D. and M.S. Exam. [duty.
6	TU	Univ. Lond. B.S. Exam. House Officers, &c., commence
7	W	Last day for applications for Clinical Clerkships and
8	TH	[Dresserships.
9	F	
10	S	
11	S	Third Sunday in Advent.
12	M	
13	TU	
14	W	Meeting to appoint Clinical Clerks and Dressers.
15	TH	
16	F	
17	S	
18	S	Fourth Sunday in Advent.
19	M	
20	TU	
21	W	Univ. Lond. M.D. List published. St. Thomas.
22	TH	Last day for Entry for Prel. Sci. and Int. Med. Exam. Univ.
23	F	[Lond.
24	S	
25	S	CHRISTMAS DAY.
26	M	Saint Stephen.
27	TU	Saint John, Evang.
28	W	Holy Innocents.
29	TH	
30	F	
31	S	

University of Cambridge First, Second, and Third M.B. Examinations are held this month.

JANUARY, 1899.

1	S	First Sunday after Christmas.
2	M	
3	TU	Clinical Clerks and Dressers commence duty.
4	W	
5	TH	
6	F	Epiphany. Meeting of Library Committee.
7	S	
8	S	First Sunday after Epiphany.
9	M	Univ. Lond. Matriculation Examination.
10	TU	
11	W	
12	TH	
13	F	
14	S	
15	S	Second Sunday after Epiphany.
16	M	Univ. Lond. Prelim. Scientific (M.B.) Exam. and Intermd.
17	TU	[Exam. in Medicine.
18	W	
19	TH	
20	F	
21	S	
22	S	Third Sunday after Epiphany.
23	M	
24	TU	
25	W	Conversion of St. Paul.
26	TH	
27	F	
28	S	
29	S	Septuagesima Sunday.
30	M	
31	TU	

First, Second, and Third Examinations of the Examining Board in England are held this month.

Examinations for Diploma in Public Health of the Royal Colleges of Physicians and Surgeons held this month.

The Registration and Museum Committees meet during this month.

FEBRUARY, 1899.

1	W	Last day for applications for House Offices, &c.*
2	Th	
3	F	
4	S	
5	S	Sexagesima Sunday.
6	M	Univ. Lond. Int. Med. Pass List published.
7	Tu	Univ. Lond. Prel. Sci. (M. B.) List published. Meeting to [appoint House Officers, &c.]
8	W	
9	Th	Queen Victoria married, 1840.
10	F	
11	S	
12	S	Quinquagesima Sunday.
13	M	Ash Wednesday. Univ. Lond. Matric. Pass List published.
14	Tu	
15	W	
16	Th	
17	F	
18	S	
19	S	First Sunday in Lent.
20	M	
21	Tu	
22	W	St. Matthias.
23	Th	
24	F	
25	S	
26	S	Second Sunday in Lent.
27	M	
28	Tu	

* Applications for these appointments to be made on forms to be obtained at the Medical Secretary's Office.

MARCH, 1899.

1	W	Last day for applications for Clinical Clerkships and [Dresserships.
2	TH	
3	F	
4	S	
5	S	Third Sunday in Lent.
6	M	
7	TU	House Officers, &c., commence duty.
8	W	Meeting to appoint Clinical Clerks and Dressers.
9	TH	
10	F	Prince of Wales married, 1863.
11	S	
12	S	Fourth Sunday in Lent.
13	M	
14	TU	
15	W	
16	TH	
17	F	
18	S	
19	S	Fifth Sunday in Lent.
20	M	
21	TU	
22	W	
23	TH	
24	F	
25	S	Annunciation. LADY DAY.
26	S	Palm Sunday.
27	M	
28	TU	
29	W	
30	TH	
31	F	Good Friday. Last day for Reports for Solly Medal [(1900). Registrar's Report for last year due.

APRIL, 1899.

1	S	
2	S	Easter Day.
3	M	Bank Holiday. Last day for Entry for M.B. Exam. [Univ. Lond.]
4	TU	Clinical Clerks and Dressers commence duty.
5	W	
6	TH	
7	F	
8	S	
9	S	First Sunday after Easter. Low Sunday.
10	M	
11	TU	
12	W	
13	TH	
14	F	
15	S	
16	S	Second Sunday after Easter.
17	M	
18	TU	
19	W	
20	TH	
21	F	
22	S	
23	S	Third Sunday after Easter.
24	M	
25	TU	St. Mark.
26	W	
27	TH	
28	F	
29	S	
30	S	Fourth Sunday after Easter.

Univ. Camb. Third M.B. and First, Second, and Third Examinations of the Examining Board in England are held this month.

The Examinations for the Mead and Cheselden Medals take place this month.

The Annual Inspection of the Museum and meeting of Museum Committee take place during this month.

The Registration Committee meets during this month.

MAY, 1899.

1	M	St. Philip and St. James. Univ. Lond. M.B. Exam. Last
2	TU	[day for Entry for Matric. Univ. Lond.
3	W	Last day for application for House Offices, &c.*
4	TH	
5	F	
6	S	
7	S	Fifth Sunday after Easter. Rogation Sunday.
8	M	
9	TU	
10	W	Meeting to appoint House Officers, &c.
11	TH	First Stone of St. Thomas's New Hospital laid by H.M. the [Queen, 1868. Ascension Day. Holy Thursday.
12	F	
13	S	
14	S	Sunday after Ascension Day.
15	M	
16	TU	
17	W	
18	TH	
19	F	
20	S	
21	S	Whit Sunday.
22	M	Bank Holiday. No Lectures.
23	TU	Univ. Lond. M.B. Pass List published.
24	W	Queen Victoria born, 1819.
25	TH	Last day for Entry for Int. Med. Exam. Univ. Lond.
26	F	
27	S	
28	S	Trinity Sunday.
29	M	
30	TU	
31	W	

Examinations for the Fellowship of the Royal College of Surgeons of England held this month.

** Applications for these appointments to be made on forms to be obtained at the Medical Secretary's Office.*

JUNE, 1899.

1	TH	Last day for Entry for Prel. Sci. (M.B.) Exam. Univ. Lond.
2	F	
3	S	
4	S	First Sunday after Trinity.
5	M	
6	TU	House Officers, &c., commence duty.
7	W	Last day for applications for Clinical Clerkships and
8	TH	[Dresserships.
9	F	New Buildings of Medical School opened by H.R.H. the
10	S	[Duke of Connaught, K.G., 1894.
11	S	Second Sunday after Trinity. St. Barnabas.
12	M	Univ. Lond. Matric. Exam.
13	TU	
14	W	Meeting to appoint Clinical Clerks and Dressers.
15	TH	
16	F	
17	S	
18	S	Third Sunday after Trinity.
19	M	
20	TU	Queen's Accession.
21	W	New St. Thomas's Hospital opened by H. M. the Queen,
22	TH	[1871.
23	F	
24	S	St. John Baptist. Midsummer Day.
25	S	Fourth Sunday after Trinity.
26	M	
27	TU	
28	W	Queen Victoria crowned, 1838.
29	TH	St. Peter.
30	F	

The Harveian Oration is delivered at the Royal College of Physicians annually in the month of June.

Doctor of Science Examination at London University takes place within the first 21 days of June.

Univ. Camb. First and Second M.B. Examinations are held within the first 14 days of June.

Examination for the Beaney Scholarship held this month.

JULY, 1899.

1	S	
2	S	Fifth Sunday after Trinity.
3	M	Univ. Lond. Int. Med. Exam.
4	Tu	Clinical Clerks and Dressers commence duty.
5	W	Last day for applications for House Offices &c., for
6	Th	[September.*
7	F	Meeting of Library Committee.
8	S	
9	S	Sixth Sunday after Trinity.
10	M	Univ. Lond. Prelim. Scientific (M.B.) Exam.
11	Tu	
12	W	Meeting to appoint House Officers, &c., for September.
13	Th	
14	F	
15	S	
16	S	Seventh Sunday after Trinity.
17	M	
18	Tu	
19	W	Univ. Lond. Matric. List published.
20	Th	
21	F	
22	S	
23	S	Eighth Sunday after Trinity.
24	M	
25	Tu	St. James.
26	W	
27	Th	
28	F	
29	S	
30	S	Ninth Sunday after Trinity.
31	M	

First, Second, and Third Examinations of the Examining Board in England are held this month.

Examinations for Diploma in Public Health of the Royal Colleges of Physicians and Surgeons held this month.

The Registration and Museum Committees meet during this month.

** Applications for these appointments to be made on forms to be obtained at the Medical Secretary's Office.*

AUGUST, 1899.

1	TU	
2	W	
3	TH	
4	F	
5	S	
6	S	Tenth Sunday after Trinity.
7	M	Bank Holiday.
8	TU	
9	W	Univ. Lond. Prelim. Sci. & Int. Med. Pass Lists published.
10	TH	
11	F	
12	S	
13	S	Eleventh Sunday after Trinity.
14	M	
15	TU	
16	W	
17	TH	
18	F	
19	S	
20	S	Twelfth Sunday after Trinity.
21	M	
22	TU	
23	W	
24	TH	St. Bartholomew.
25	F	
26	S	
27	S	Thirteenth Sunday after Trinity.
28	M	
29	TU	
30	W	
31	TH	

SEPTEMBER, 1899.

1	F	
2	S	
3	S	Fourteenth Sunday after Trinity.
4	M	
5	Tu	House Officers, &c., commence duty.
6	W	Last day for applications for Clinical Clerkships and
7	Th	[Dresserships.
8	F	
9	S	
10	S	Fifteenth Sunday after Trinity.
11	M	
12	Tu	
13	W	Meeting to appoint Clinical Clerks and Dressers.
14	Th	
15	F	
16	S	
17	S	Sixteenth Sunday after Trinity.
18	M	
19	Tu	
20	W	
21	Th	St. Matthew.
22	F	
23	S	
24	S	Seventeenth Sunday after Trinity.
25	M	Last day for Entry for B.Sc. Exam., Univ. Lond.
26	Tu	
27	W	
28	Th	
29	F	Michaelmas Day.
30	S	Last day for Essay for Grainger Prize.

The Hospital Entrance Scholarships Examination takes place during the last week of this month.

OCTOBER, 1899.

1	S	Eighteenth Sunday after Trinity.
2	M	Last Day for Entry Univ. Lond. M.B. Exam.
3	TU	Clinical Clerks and Dressers commence duty.
4	W	
5	TH	
6	F	Meeting of Library Committee.
7	S	
8	S	Nineteenth Sunday after Trinity.
9	M	
10	TU	
11	W	
12	TH	
13	F	
14	S	
15	S	Twentieth Sunday after Trinity.
16	M	
17	TU	
18	W	St. Luke.
19	TH	
20	F	
21	S	
22	S	Twenty-first Sunday after Trinity.
23	M	Univ. Lond. B.Sc. Exam.
24	TU	
25	W	
26	TH	
27	F	
28	S	St. Simon and St. Jude.
29	S	Twenty-second Sunday after Trinity.
30	M	Univ. Lond. M.B. Exam.
31	TU	

The Registration and Museum Committees meet during this month.

The Primary Examination of the Society of Apothecaries is held Quarterly, in the months of October, January, April, and July. The Final is held monthly; the Surgical part commences on the second Wednesday, and the Medical on the Monday following.

First, Second, and Third Examinations of the Examining Board in England are held this month.

HOLDERS OF APPOINTMENTS IN ST. THOMAS'S HOSPITAL SINCE 1871.

RESIDENT ASSISTANT PHYSICIANS.

1871. G. H. EVANS	1885. H. W. G. MACKENZIE
1874. F. C. TURNER	1888. H. P. HAWKINS
1876. S. J. SHARKEY	1891. H. G. TURNEY
1880. G. GULLIVER	1894. S. G. TOLLER
1882. C. E. SHEPPARD	1897. C. R. BOX
1883. R. PERCY SMITH	

RESIDENT ASSISTANT SURGEONS.

1871. W. W. WAGSTAFFE	1886. W. H. BATTLE
1874. A. O. MACKELLAR	1888. H. B. ROBINSON
1876. H. H. CLUTTON	1891. E. C. STABB
1880. B. PITTS	1894. F. C. ABBOTT
1883. G. H. MAKINS	1897. C. S. WALLACE

MEDICAL REGISTRARS.

1871. S. E. SOLLY	1880. G. GULLIVER
1872. F. POLLARD	1882. C. E. SHEPPARD
1873. W. S. GREENFIELD	1883. W. B. HADDEN
1875. H. W. VERDON	1888. H. W. G. MACKENZIE
1876. T. C. CHARLES	1893. S. G. TOLLER
1877. E. S. NORRIS	1894. C. R. BOX
1878. T. C. CHARLES	1897. A. E. RUSSELL
1879. W. B. HADDEN	

SURGICAL REGISTRARS.

1871. W. ANDERSON	1886. G. H. MAKINS
1872. C. E. SAUNDERS	1887. C. A. BALLANCE
1873. C. CREIGHTON	1888. E. SOLLY
1874. S. OSBORN	1891. E. C. STABB
1876. { H. H. CLUTTON	1892. F. C. ABBOTT
{ C. H. NEWBY	1894. C. S. WALLACE
1878. H. P. POTTER	1897. E. O. THURSTON
1881. W. H. BATTLE	

OBSTETRIC REGISTRARS.

1893. W. W. H. TATE	1897. A. F. STARR
1898. J. S. FAIRBAIRN	

HOUSE PHYSICIANS.

1871-2. E. COX	1873-4. E. WELCHMAN
S. OSBORN	H. B. DONKIN
J. S. SLATER	T. HIGHTON
1872-3. B. ADDY	C. M. TAYLOR
A. H. LAVER	H. S. BENNETT
L. WILLIAMS	1874-5. A. S. L. NEWINGTON
W. GARTON	J. W. CLARKSON
R. ZIMMERMAN	W. S. MAJOR
	A. LINGARD

HOUSE PHYSICIANS—*continued.*

1875-6.	C. H. NEWBY G. F. ROSSITER W. EDMUNDS H. P. POTTER S. W. J. JOSEPH	1886-7.	A. E. GODFREY } (Non- A. J. H. MONTAGUE } res.)
1876-7.	T. TWINING J. F. NICHOLSON J. R. LEESON W. H. PAGE.	1887-8.	H. P. HAWKINS H. J. MACEVOY W. W. ORD E. HOBHOUSE R. NAIRN H. J. SMYTH } (Non-res.) R. NAIRN } J. T. CALVERT }
1877-8.	J. A. M. MOULLIN G. H. MAKINS H. U. SMITH W. TYRRELL	1888-9.	H. B. LUARD C. W. COOKE H. C. BRISTOWE H. G. TURNEY C. H. ECCLES } (Non- W. H. L. COPELAND } res.)
1878-9.	W. H. BATTLE G. H. D. GIMLETTE C. E. SHEPPARD F. M. SANDWITH	1889-90.	T. P. COWEN F. C. ABBOTT F. E. FORWARD S. G. TOLLER M. H. SPENCER } (Non- L. COBBETT } res.)
1879-80.	W. W. GROOME R. P. SMITH J. SHAW A. NEWSHOLME	1890-1.	W. W. STABB T. A. DUKES A. KING W. F. UMNEY G. H. WICKHAM } (Non- H. J. COOPER } res.) H. LOW } C. P. LOVELL }
1880-1.	H. P. BUTLER G. S. HATTON H. R. HUTTON T. D. ACLAND	1891-2.	C. R. BOX T. H. KELLOCK C. LATTER J. J. PERKINS C. WYMAN G. R. F. STILWELL } (Non- D. F. SHEARER } res.) W. P. PURVIS }
1881-2.	T. D. SAVILL C. F. COXWELL A. B. CARPENTER S. W. SUTTON	1892-3.	W. A. BOWRING W. WATKINS-PITCHFORD C. S. JAFFÉ A. R. O. MILTON W. P. FOOKS } (Non- A. DALZELL } res.) E. M. HAINWORTH } M. R. P. DORMAN }
1882-3.	A. E. WELLS W. WANSBROUGH JONES C. W. HAIG-BROWN W. FELL E. F. WHITE } (Non- L. W. BICKLE } res.)	1893-4.	T. W. HICKS G. W. THOMPSON A. E. RUSSELL W. J. C. MERRY P. NORTHCOTE } (Non- G. W. H. BIRD } res.) F. PERSHOUSE } C. W. WINDSOR }
1883-4.	A. FOXWELL H. M. N. MILTON C. D. GREEN W. HULL W. J. SHEPPARD } (Non- J. ORFORD } res.)	1894-5.	R. E. NIX A. M. COLLCUTT E. A. SAUNDERS G. G. GENGE
1884-5.	G. D. JOHNSTON F. F. CAIGER H. B. ROBINSON H. W. G. MACKENZIE F. W. S. STONE } (Non- H. H. LANKESTER } res.)		
1885-6.	R. M. WILLIAMS J. M. CLARKE J. S. HUTTON E. D. RITCHIE T. GLOVER LYON } (Non- Y. SANAYOSHI } res.) F. M. HAIG }		
1886-7.	F. D. CROWDY A. A. BROCKATT C. S. EVANS S. W. WHEATON		

HOUSE PHYSICIANS—*continued.*

1894-5.	T. G. NICHOLSON A. S. F. GRÜNBAUM F. J. BRAKENRIDGE J. W. LAVER	} (Non-res.)	1896-7.	G. J. CONFORD L. W. RICHARDS A. W. SIKES J. P. SCATCHARD J. S. FAIRBAIRN E. STAINER
1895-6.	E. G. C. DANIEL L. L. JENNER F. B. THORNTON W. E. DIXON P. J. A. SECCOMBE F. G. LAYTON E. W. PALIN P. S. HICHENS		1897-8.	H. C. JONAS C. G. SELIGMANN W. McDUGALL H. N. GOODE H. E. HEWITT R. H. BELL H. H. SCOTT H. F. SHEA.
1896-7.	W. H. J. PATERSON E. H. T. NASH			

HOUSE SURGEONS.

1871-2.	R. CORY H. WILLIAMS S. OSBORN T. H. BONSER		1880-1.	H. P. BUTLER A. B. CARPENTER
1872-3.	E. SERGEANT W. GARTON A. H. LAVER G. CLEGHORN		1881-2.	T. D. ACLAND F. W. MARLOW M. P. M. COLLIER E. F. WHITE
1873-4.	I. BOULGER E. WELCHMAN A. V. MAYBURY H. W. VERDON		1882-3.	W. A. DUNCAN C. W. HAIG BROWN H. M. MILTON A. E. WELLS
1874-5.	J. CROSSMAN G. M. TAYLOR G. F. ROSSITER J. W. CLARKSON		1883-4.	W. WANSBROUGH JONES G. F. COOPER F. F. CAIGER G. D. JOHNSTON
1875-6.	H. P. POTTER H. H. CLUTTON C. H. NEWBY R. MAPLES		1884-5.	J. ORFORD H. B. ROBINSON W. HULL C. D. GREEN
1876-7.	B. PITTS R. MAPLES C. C. SMITH W. EDMUNDS		1885-6.	R. LAWSON B. RELTON F. D. CROWDY H. CAMERON KIDD
1877-8.	J. F. NICHOLSON J. BLACK F. H. WEEKES W. H. BATTLE		1886-7.	E. S. GOODDY F. E. NICHOL E. D. RITCHIE J. S. HUTTON W. H. C. STAVELEY
1878-9.	G. H. MAKINS G. H. D. GIMLETTE H. U. SMITH W. F. HASLAM K. TAKAKI H. CASTLE		1887-8.	S. H. JONES J. H. TONKING E. C. STABB L. A. BIDWELL
1879-80.	D. S. DAVIES R. J. WILLIAMSON R. P. SMITH C. E. SHEPPARD		1888-9.	W. F. BROOK F. FAWSETT W. W. ORD J. T. CALVERT F. C. ABBOTT R. V. SOLLY C. H. JAMES C. BROWN
1880-1.	J. R. LUNN C. A. BALLANCE		1889-90.	H. G. TURNEY

HOUSE SURGEONS—*continued.*

1889-90.	A. N. BOYCOTT H. H. HULBERT F. R. S. MILTON T. W. LAMBERT T. P. COWEN G. E. ANSON H. GERVIS	1893-4.	E. M. HAINWORTH A. R. O. MILTON G. W. THOMPSON
1890-1.	A. F. STABB A. C. LANKESTER H. W. NIX E. E. WARE S. G. TOLLER W. S. GRIFFITH W. G. G. STOKES L. A. J. ROUILLARD	1894-5.	H. A. DICKSON L. J. MISKIN A. W. CUFF W. J. C. MERRY G. J. ARNOLD R. FOX SYMONS A. E. RUSSELL H. W. HARDING
1891-2.	L. COBBETT T. H. HAYDON J. R. HARPER C. WYMAN T. H. KELLOCK C. R. BOX W. F. E. MILTON T. A. M. FORDE	1895-6.	E. O. THURSTON A. L. HOME W. G. STONE H. J. DAVIS L. A. R. WALLACE H. C. CROUCH J. L. PRAIN G. J. CONFORD
1892-3.	A. BANKS H. BURDEN J. H. FISHER P. J. ATKEY W. P. PURVIS R. R. LAW W. G. SUTCLIFFE W. L. WAINWRIGHT	1896-7.	B. DYBALL P. W. KENT J. SMITH W. D. FRAZER A. ROTHERHAM A. J. MARTINEAU F. H. GERVIS R. G. STRANGE G. E. O. TAYLOR
1893-4.	C. S. WALLACE E. SMITH W. REDPATH C. PLANCK S. W. F. RICHARDSON	1897-8.	W. H. J. PATERSON A. W. TUKE L. GILBERT S. N. BARINGTON J. F. MCCLEAN H. J. MARRIAGE J. S. HALL H. H. SANGUINETTI

ASSISTANT HOUSE PHYSICIANS.

1877-8.	W. TYRRELL R. B. BOTHAMLEY W. H. BATTLE E. H. HARE	1880-1.	F. R. WALTERS C. B. RICHARDSON H. SWALE J. B. LAWFORD
1878-9.	S. A. CRICK J. H. BATTYE K. TAKAKI W. W. GROOME W. B. HADDEN W. F. HASLAM R. C. BENNINGTON	1881-2.	C. A. BALANCE M. P. M. COLLIER A. B. CARPENTER H. N. HOLBERTON S. W. SUTTON A. E. WELLS F. W. MARLOW R. HEELIS
1879-80.	R. P. SMITH D. S. DAVIES J. SHAW A. NEWSHOLME J. R. LUNN R. J. WILLIAMSON	1882-3.	F. E. MARSTON G. F. COOPER C. W. HAIG-BROWN H. M. N. MILTON W. FELL W. J. SHEPPARD
1880-1.	J. R. LUNN T. D. SAVILL G. S. HATTON	1883-4.	W. HULL F. F. CAIGER

ASSISTANT HOUSE PHYSICIANS—*continued.*

1883-4.	C. D. GREEN W. B. TOMSON	1886-7.	C. S. EVANS H. CAMERON KIDD
1884-5.	T. SCUTT Y. SANEYOSHI R. LAWSON H. W. G. MACKENZIE R. M. WILLIAMS		W. H. C. STAVELEY H. P. HAWKINS
1885-6.	J. R. STADDON E. D. RITCHIE E. S. GOODDY A. E. GODFREY	1887-8.	H. A. SANSOM H. T. BULSTRODE S. B. COOK
		1888-9.	H. B. SEDDON G. R. ANDERSON
		1889-90.	W. B. DE JERSEY T. H. DICKSON

ASSISTANT HOUSE SURGEONS.

1877-8.	E. L. G. GAMBLE G. H. D. GIMLETTE	1887-8.	F. FAWSETT E. SOLLY C. BROWN R. V. SOLLY
1878-9.	W. F. HASLAM H. CASTLE R. P. SMITH D. S. DAVIES	1888-9.	C. H. JAMES C. W. COOKE S. B. COOK E. HOBHOUSE H. DUNCAN F. C. ABBOTT A. N. BOYCOTT H. H. HULBERT
1879-80.	R. J. WILLIAMSON C. A. BALLANCE A. NEWSHOLME J. R. LUNN	1889-90.	F. R. S. MILTON H. C. BRISTOWE G. E. ANSON H. GERVIS T. P. COWEN A. F. STABB A. C. LANKESTER J. H. DEWHURST
1880-1.	F. R. WALTERS C. B. RICHARDSON M. P. M. COLLIER H. SWALE	1890-1.	H. W. NIX E. E. WARE S. G. TOLLER W. G. G. STOKES D. F. SHEARER L. A. J. ROUILLARD T. H. HAYDON J. R. HARPER
1881-2.	S. W. SUTTON A. E. WELLS E. F. WHITE C. W. HAIG-BROWN	1891-2.	L. COBBETT C. WYMAN W. F. E. MILTON T. A. M. FORDE T. H. KELLOCK C. R. BOX H. BURDEN P. J. ATKEY
1882-3.	H. M. N. MILTON W. FELL G. F. COOPER W. HULL	1892-3.	A. BANKS J. H. FISHER R. R. LAW W. G. SUTCLIFFE W. P. PURVIS W. L. WAINWRIGHT C. S. WALLACE E. SMITH
1883-4.	W. WANSBROUGH JONES G. D. JOHNSTON F. F. CAIGER W. J. SHEPPARD		
1884-5.	H. B. ROBINSON C. D. GREEN R. LAWSON B. RELTON Y. SANEYOSHI		
1885-6.	E. D. RITCHIE F. D. CROWDY H. CAMERON KIDD E. S. GOODDY		
1886-7.	F. E. NICHOL C. S. EVANS W. H. C. STAVELEY S. H. JONES K. TOTSUKA J. H. TONKING E. C. STABB		
1887-8.	L. A. BIDWELL W. F. BROOK J. T. CALVERT W. W. ORD		

ASSISTANT HOUSE SURGEONS—*continued.*

1893-4.	W. REDPATH C. PLANCK E. M. HAINWORTH A. R. O. MILTON S. W. F. RICHARDSON R. W. ORD J. W. HEWETT H. A. DICKSON	1895-6.	G. J. CONFORD B. DYBALL P. W. KENT J. SMITH W. D. FRAZER
1894-5.	L. J. MISKIN A. W. CUFF G. J. ARNOLD R. FOX SYMONS A. E. RUSSELL H. W. HARDING E. O. THURSTON A. L. HOME	1896-7.	A. J. MARTINEAU F. H. GERVIS R. G. STRANGE G. E. O. TAYLOR W. H. J. PATERSON A. W. TUKE L. GILBERT S. N. BABINGTON
1895-6.	W. G. STONE H. J. DAVIS L. A. R. WALLACE H. C. CROUCH J. L. PRAIN	1897-8.	J. F. MCCLEAN H. J. MARRIAGE J. S. HALL H. H. SANGUINETTI E. H. COBB A. C. ROBINSON F. L. A. GREAVES A. H. GREG

RESIDENT ACCOUCHEURS.

1871-2.	G. C. FRANKLIN. B. ADDY W. GARTON	1880-1.	H. CASTLE A. NEWSHOLME J. SHAW J. R. LUNN
1872-3.	J. S. SLATER M. H. C. PALMER E. SERGEANT L. WILLIAMS	1881-2.	W. F. HASLAM H. P. BUTLER W. A. DUNCAN T. D. ACLAND
1873-4.	G. M. WHITEHEAD C. H. NEWBY I. BOULGER E. H. DAVIS	1882-3.	A. E. WELLS G. F. COOPER S. W. SUTTON T. D. SAVILL
1874-5.	H. S. BENNETT C. M. TAYLOR	1883-4.	F. F. CAIGER W. FELL W. J. SHEPPARD W. WANSBROUGH JONES
1875-6.	W. EDMUNDS S. W. J. JOSEPH G. F. ROSSITER C. C. SMITH	1884-5.	J. ORFORD W. HULL C. D. GREEN G. D. JOHNSTON
1876-7.	W. MORGAN T. MILMAN B. PITTS R. MAPLES	1885-6.	R. E. ROUSE J. E. KERSHAW H. H. LANKESTER A. A. BROCKATT
1877-8.	C. H. H. CAMERON G. H. D. GIMLETTE C. H. WHITE F. H. WEEKES	1886-7.	J. S. HUTTON C. YEOMAN A. E. GODFREY H. J. MACEVOY
1878-9.	J. F. NICHOLSON W. TYRRELL F. M. SANDWICH H. U. SMITH	1887-8.	E. SOLLY W. A. BOND H. J. SMYTH J. D. BALLANCE
1879-80.	W. H. BATTLE K. TAKAKI C. E. SHEPPARD C. A. BALLANCE	1888-9.	S. W. WHEATON C. H. JAMES H. B. LUARD E. C. STABB

RESIDENT ACCOUCHEURS—continued.

1889-90.	F. FAWSETT G. R. ANDERSON G. E. ANSON A. N. BOYCOTT	1890-1.	H. B. OSBURN H. GERVIS H. LOW W. R. CARTER
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SENIOR OBSTETRIC HOUSE PHYSICIANS.

1891-2.	J. R. HARPER W. G. G. STOKES W. F. UMNEY A. BANKS	1894-5.	E. G. E. ARNOLD W. E. F. TINLEY
1892-3.	W. L. WAINWRIGHT T. H. HAYDON C. S. WALLACE R. K. ELLIS	1895-6.	S. W. F. RICHARDSON G. CANDLER E. A. SAUNDERS G. G. GENGE
1893-4.	W. A. BOWRING J. H. FISHER R. F. CHANCE T. W. HICKS	1896-7.	C. W. GRANT WILSON P. L. BLABER E. L. COLLIS A. L. HOME
1894-5.	C. S. JAFFÉ P. C. FENWICK	1897-8.	J. B. TOMBLESON J. S. FAIRBAIRN G. D. HINDLEY S. D. TURNER

SENIOR OBSTETRIC CLERKS.

1889-90.	H. B. OSBURN H. LOW	1890-1.	W. R. CARTER J. R. HARPER H. D. LEVICK
1890-1.	W. G. G. STOKES		

JUNIOR OBSTETRIC HOUSE PHYSICIANS.

1891-2.	W. F. UMNEY A. BANKS W. L. WAINWRIGHT T. H. HAYDON	1894-5.	W. E. F. TINLEY S. W. F. RICHARDSON
1892-3.	C. LATTER C. S. WALLACE R. K. ELLIS W. A. BOWRING	1895-6.	G. CANDLER E. A. SAUNDERS G. G. GENGE C. W. GRANT WILSON.
1893-4.	J. H. FISHER R. F. CHANCE T. W. HICKS C. S. JAFFÉ	1896-7.	P. L. BLABER E. L. COLLIS A. L. HOME J. B. TOMBLESON
1894-5.	P. C. FENWICK E. G. E. ARNOLD	1897-8.	J. P. SCATCHARD G. D. HINDLEY S. D. TURNER H. T. M. ALFORD

OPHTHALMIC HOUSE SURGEONS.

These appointments took the place of the "Clinical Assistants in the Eye Department."

1890-1.	H. C. BRISTOWE F. E. FORWARD	1894-5.	J. H. FISHER H. G. TOOMBS
1891-2.	C. H. USHER S. G. TOLLER	1895-6.	A. H. P. DAWNAY E. A. SAUNDERS
1892-3.	J. FISHER E. P. ISAACS	1896-7.	P. S. HICHENS E. HOPKINSON
1893-4.	J. F. RUDALL J. H. FISHER	1897-8.	F. A. C. TYRRELL N. BABINGTON

SCHOLARSHIPS AND MEDALS.

ENTRANCE SCIENCE SCHOLARS.

1875-6.	H. A. H. FENTON T. D. SAVILL	1887-8.	W. B. WINSTON
1876-7.	R. J. WILLIAMSON H. N. HOLBERTON	1888-9.	E. M. HAINWORTH E. SMITH
1877-8.	W. WANSBROUGH JONES A. E. WELLS	1889-90.	T. G. NICHOLSON A. E. RUSSELL
1878-9.	W. HULL	1890-1.	P. J. DEAR W. E. DIXON H. C. CROUCH
1879-80.	R. M. WILLIAMS B. RELTON	1891-2.	A. H. STEWART F. H. GERVIS
1880-1.	R. LAWSON H. H. LANKESTER	1892-3.	A. W. SIKES C. G. SELIGMANN
1881-2.	SYDNEY H. JONES J. S. HUTTON	1893-4.	R. W. C. PIERCE H. E. HEWITT
1882-3.	H. DUNCAN E. D. SHIRTLIFF	1894-5.	J. GAFF H. R. BEALE
1883-4.	C. W. COOKE F. FAWSETT	1895-6.	F. B. SKERRETT W. B. FRY
1884-5.	F. C. ABBOTT C. J. MARTIN	1896-7.	A. B. LINDSEY R. E. ROBERTS
1885-6.	A. F. STABB S. G. TOLLER	1897-8.	W. H. HARWOOD-YARRED F. H. WHITEHEAD
1886-7.	C. P. LOVELL M. C. CLUTTERBUCK		
1887-8.	J. E. HARRIS		

UNIVERSITY SCHOLARS.

1894-5.	W. McDougall	1896-7.	R. J. HORTON SMITH
1895-6.	P. W. G. SARGENT	1897-8.	F. C. EVE

TITE SCHOLARS.

1875. Change made in mode of award.

1861-2-3.	H. SUMMERHAYES	1884-5.	F. C. ABBOTT
1864-5-8.	J. J. RIDGE	1885-6.	A. F. STABB
1867-8.	H. MEADOWS	1886-7.	H. BURDEN
1870-1-2.	I. BOULGER	1887-8.	J. H. FISHER
1873-4-5.	F. H. PECK	1888-9.	E. SMITH
1875-6.	T. D. SAVILL	1889-90.	S. W. F. RICHARDSON
1876-7.	W. A. DUNCAN	1890-1.	K. J. PREVITÉ ORTON
1877-8.	W. WANSBROUGH JONES	1891-2.	J. C. HARCOURT
1878-9.	F. H. FURNIVAL	1892-3.	A. W. SIKES
1879-80.	C. D. GREEN	1893-4.	H. E. HEWITT
1880-1.	R. LAWSON	1894-5.	J. GAFF
1881-2.	SYDNEY H. JONES	1895-6.	C. F. SELOUS
1882-3.	H. P. HAWKINS	1896-7.	C. N. SEARS
1883-4.	F. FAWSETT	1897-8.	W. H. HARWOOD-YARRED

MUSGROVE SCHOLARS.

Founded, April, 1875.

1875-6-7.	S. J. TAYLOR	1886-7-8.	A. F. STABB
1877-8-9.	W. A. DUNCAN	1888-9-90.	J. H. FISHER
1880-1-2.	W. B. TOMSON	1890-1-2.	S. W. F. RICHARDSON
1882-3-4.	S. H. JONES } æq. K. TOTSUKA }	1892-3-4.	M. TAKAYASU
1884-5-6.	F. FAWSETT	1894-5-6.	H. E. HEWITT
		1896-7.	C. F. SELOUS

PEACOCK SCHOLARS.

1883-4-5. H. P. HAWKINS
 1885-6-7. F. C. ABBOTT
 1887-8-9. C. P. LOVELL
 1889-90-1. C. PLANCK

1891-2-3. G. G. GENGÉ
 1893-4-5. A. W. SIKES
 1895-6-7. J. GAFF
 1897-8. C. N. SEARS

CHESELDEN MEDALISTS.

1850-1. F. J. MONEY
 1851-2. H. LANKESTER
 T. B. CROSBY (bronze
 medal)
 1852-3. J. E. MORETON
 1853-4. W. N. CHIPPERFIELD
 1854-5. W. M. ORD
 1855-6. J. W. COUSINS
 1856-7. C. F. GEORGE
 1857-8. E. WOAKES
 1858-9. C. H. DRAKE
 1859-60. T. DRAKE
 1860-1. J. W. HICKS
 1861-2. J. F. DECK
 1862-3. C. A. GREAVES
 1863-4. W. W. WAGSTAFFE
 1864-5. F. H. WARD
 1865-6. W. W. INGLIS
 1866-7. W. ANDERSON
 1867-8. F. POLLARD
 1868-9. L. M. THOMAS
 1869-70. E. SERGEANT
 1870-1. J. H. BONSER
 1871-2. A. H. LAVER
 1872-3. G. F. ROSSITER
 1873-4. H. P. POTTER

1874-5. J. F. NICHOLSON
 1875-6. _____
 1876-7. H. U. SMITH
 1877-8. W. F. HASLAM
 1878-9. K. TAKAKI
 1879-80. W. A. DUNCAN
 1880-1. C. W. HAIG-BROWN
 1881-2. _____
 1882-3. G. D. JOHNSTON
 1883-4. R. LAWSON
 1884-5. S. H. JONES
 1885-6. J. H. TONKING
 1886-7. F. FAWSETT
 1887-8. F. C. ABBOTT
 1888-9. A. C. LANKESTER
 1889-90. T. H. KELLOCK
 1890-1. A. BANKS
 1891-2. W. G. SUTCLIFFE
 1892-3. S. W. F. RICHARDSON
 1893-4. E. O. THURSTON
 1894-5. B. DYBALL
 A. J. MARTINEAU
 (Bronze Medal)
 1895-6. J. P. SCATCHARD
 1896-7. A. C. ROBINSON
 1897-8. S. O. BINGHAM

NEWMAN SMITH PRIZE (MEAD).

1850. J. W. KEYWORTH
 1853. J. E. MORETON
 1854. E. CLAPTON

1855. W. H. STONE
 1858. E. WOAKES
 1859. J. HILDITCH

MEAD MEDALISTS.

In lieu of the Newman Smith Prize from December, 1874.

1874-5. J. F. NICHOLSON
 1875-6. _____
 1876-7. G. B. LONGSTAFF
 1877-8. S. J. TAYLOR
 1878-9. T. D. ACLAND
 1879-80. C. F. COXWELL
 1880-1. W. WANSBROUGH JONES
 1881-2. W. HULL
 1882-3. F. F. CAIGER
 1883-4. H. W. G. MACKENZIE
 1884-5. F. D. CROWDY
 1885-6. S. W. WHEATON
 1885-6. H. J. MACEVOY (Bronze
 Medal)

1886-7. W. W. ORD
 1887-8. H. G. TURNEY
 1888-9. S. G. TOLLER
 1889-90. W. W. STABB
 1890-1. C. LATTER
 1891-2. A. R. O. MILTON
 1892-3. E. A. SAUNDERS
 1893-4. G. G. GENGÉ
 1894-5. F. B. THORNTON
 1895-6. A. W. SIKES
 1896-7. H. C. JONAS
 1897-8. E. F. BUZZARD

TREASURER'S GOLD MEDALISTS.

1846-7.	H. D. BENWELL	1871-2.	A. V. MAYBURY
1847-8.	J. S. BRISTOWE	1872-3.	G. F. ROSSITER
1848-9.	L. W. SEDGWICK	1873-4.	H. C. SANDFORD
1849-50.	A. CARPENTER	1874-5.	J. F. NICHOLSON
1850-1.	{ F. J. MONEY (Gold Medal) C. W. CHALDECOTT (Silver Medal)	1875-6.	-----
1851-2.	H. LANKESTER	1876-7.	C. E. SHEPPARD
1852-3.	J. E. MORETON	1877-8.	S. J. TAYLOR
1853-4.	W. N. CHIPPERFIELD	1878-9.	K. TAKAKI
1854-5.	W. M. ORD	1879-80.	W. A. DUNCAN
1855-6.	W. H. STONE	1880-1.	W. WANSBROUGH JONES
1856-7.	J. WILLIAMS	1881-2.	W. J. SHEPPARD
1857-8.	H. GERVIS	1882-3.	W. B. TOMSON
1858-9.	C. H. DRAKE	1883-4.	R. LAWSON
1859-60.	T. DRAKE	1884-5.	S. H. JONES
1860-1.	J. W. HICKS	1885-6.	H. J. SMYTH
1861-2.	J. F. DECK	1886-7.	F. FAWSETT
1862-3.	H. SUMMERHAYES	1887-8.	F. C. ABBOTT
1863-4.	W. W. WAGSTAFFE	1888-9.	A. F. STABB
1864-5.	F. H. WARD	1889-90.	A. KING
1865-6.	A. WALLER	1890-1.	J. H. FISHER
1866-7.	N. C. DOBSON	1891-2.	E. SMITH
1867-8.	J. J. RIDGE	1892-3.	S. W. F. RICHARDSON
1868-9.	H. W. SAUNDERS	1893-4.	G. G. GENGE
1869-70.	J. S. SLATER	1894-5.	A. J. MARTINEAU
1870-1.	B. ADDY	1895-6.	J. P. SCATCHARD
		1896-7.	A. W. SIKES
		1897-8.	H. E. HEWITT

SOLLY MEDALISTS.

Founded, 1873.

1877.	W. H. BATTLE	1888.	C. H. JAMES
	C. W. DE LACY EVANS	1890.	C. WYMAN
1878.	C. E. SHEPPARD	1892.	W. B. WINSTON
1880.	C. A. BALLANCE	1894.	M. A. TEALE
1882.	W. A. DUNCAN	1896.	E. H. T. NASH
1884.	J. PIETERSEN	1898.	C. W. PILCHER
1886.	E. SOLLY		

GRAINGER TESTIMONIAL PRIZEMEN.

1866.	J. J. RIDGE	1886-7.	F. G. PARSONS
1874-5.	H. P. POTTER	1893-4.	A. S. F. GRÜNBAUM
1878-9.	W. A. DUNCAN	1896-7.	W. MCDUGALL
1882-3.	C. S. SHERRINGTON	1897-8.	R. BEER

BRISTOWE MEDALISTS.

1894-5.	A. L. HOME	1896-7.	C. G. SELIGMANN
1895-6.	E. L. COLLIS	1897-8.	A. W. SIKES

THE SALTERS' COMPANY RESEARCH FELLOWS.

1895.	C. S. JAFFÉ	1896.	W. E. DIXON
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BEANEY SCHOLAR.

1896. B. DYBALL

LOCAL LIST OF OLD STUDENTS OF ST. THOMAS'S HOSPITAL.

ENGLAND AND WALES.

(Excluding the London District.)

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|--|---|
| ABBOTS-BROMLEY, STAFF.—
N. J. Newbould. | BATH, SOMERSET.—
R. A. Bayliss, A. L. Fuller, W. N. Heygate, J. Jarvis, P. King, W. S. Melsome, W. H. Thorman. |
| ABBOTSBURY, DORSET.—
W. Hawkins. | BATLEY, YORKS.—
J. Russell. |
| ABERDARE, GLAMORG.—
E. Jones, E. J. T. Jones. | BAWTRY, YORKS.—
W. F. Ward. |
| ABERYSTWITH, CARD.—
T. P. Beddoes. | BECCLES, SUFFOLK.—
H. P. Helsham. |
| ACOCK'S GREEN, WORC.—
H. Lowe. | BECKENHAM, KENT.—
E. Carpenter, G. R. F. Stilwell, E. S. Whelpton. |
| AINTREE, LANC.—
A. Price, E. S. Sugden. | BEDFORD.—
C. G. Johnson, W. G. Johnson, A. S. Phillips, W. Stokes (retired). |
| ALDERLEY EDGE, MANCHESTER.—
J. R. Carver. | BEXHILL, SUSSEX.—
H. H. Heffernan, J. Rew. |
| ALDERNEY, CHANNEL ISLANDS.—
E. W. Livesey. | BILLESDON, LEICESTER.—
P. Northcote. |
| ALFORD, LINC.—
A. E. Odling. | BIRKENHEAD, CHESHIRE.—
H. L. Pearson. |
| ALNWICK, NTHLD.—
R. B. Robson. | BIRMINGHAM, WARWICK.—
G. Allcock, J. D. Ballance, H. R. Bracey, A. Foxwell, W. F. Haslam, F. V. Milward, F. B. G. Stableford. |
| ASHBY-DE-LA-ZOUCH, LEIC.—
R. R. W. Logan. | BISHOP'S STORTFORD, HERTS.—
H. Gervis, J. E. Morris. |
| ASKAM-IN-FURNESS, LANCS.—
S. B. Cook. | BLACKROD, LANC.—
H. Smith. |
| AUDLEM, CHESH.—
H. Greaves. | BLAGDON, SOMERS.—
T. O. Halliwell. |
| AUGHTON, YORKS.—
W. Garton. | BOOTLE, LANC.—
R. J. Sprakeling. |
| AYLESTONE, LEIC.—
E. H. Snoad. | BOROUGHBRIDGE, YORKS.—
J. Sedgwick. |
| AYLSHAM, NORFOLK.—
P. C. Shephard. | BORROWASH, DERBYSHIRE.—
J. A. Hunt. |
| BAGSHOT, SURREY.—
H. B. Osburn. | BOSTON, LINC.—
F. Snaith, R. E. E. South, E. P. Wrinch. |
| BAKEWELL, DERBY.—
E. B. Wrench, E. M. Wrench. | BOTLEY, HANTS.—
A. Pern. |
| BAMBER BRIDGE, LANC.—
J. Bibby. | BOURNEMOUTH, HANTS.—
T. W. Blake, H. E. Girdlestone, H. K. Hitchcock, W. H. L. Marriner, W. L. G. Morgan, W. S. Tebb, G. F. Worthington. |
| BANBURY, OXFORD.—
R. Rygate. | |
| BARNSTAPLE, DEVON.—
J. R. Harper. | |
| BARTON-UPON-HUMBER, LINC.—
W. H. Sissons. | |
| BASCHURCH, SALOP.—
E. H. O. Sankey. | |
| BASLOW, DERBYSHIRE.—
E. M. Wrench. | |

- BRADFORD, YORKS.—
J. B. Hall, P. G. Lodge, S. Lodge.
- BRADFORD-UPON-AVON, WILTS.—
W. J. A. Adye.
- BRAMERTON, NORFOLK.—
C. E. Hardyman (retired).
- BRAUNTON, DEVON.—
W. J. Harper.
- BRECON.—
G. P. Francis.
- BRENT KNOLL, SOMERS.—
J. W. Papillon.
- BRENTFORD, MIDDLESEX.—
W. S. Fincham, F. N. Williams.
- BRIDGWATER, SOMERS.—
G. W. H. Bird, Rev. C. W. Whistler.
- BRIDLINGTON-QUAY, YORKS.—
H. J. C. Godfrey.
- BRIDPORT, DORSET.—
S. J. Alden.
- BRIGHTLINGSEA, ESSEX.—
H. S. Cooper.
- BRIGHTON, SUSSEX.—
P. R. Adkins, J. Brock, A. M. Colcutt, E. Hobhouse, L. Houghton, L. Huntley, G. D. Kerr, A. Newsholme, C. B. Richardson, R. E. Rouse, C. J. Smith, E. Treves, E. Webster, C. H. Welch, A. W. Williams.
- BRISTOL.—
H. Appleton (ret.), F. St. J. Bullen, D. S. Davies, J. A. Harding (retired), W. D. Henderson.
- BRITON FERRY, GLAMORG.—
A. Jeffreys.
- BRIXWORTH, NORTHANTS.—
W. L. Wainwright.
- BROAD CHALK, WILTS.—
A. Longman.
- BROADWAS-ON-TEME, WORC.—
J. T. Penhall (retired).
- BROCKHURST, HANTS.—
R. Holloway.
- BROMLEY, KENT.—
P. I. Cook, C. W. Grant Wilson, W. W. Inglis.
- BROMSGROVE, WORC.—
H. C. Kidd.
- BUCKDEN, HUNTS.—
W. H. Hillyer.
- BUDLEIGH-SALTERTON, DEVON.—
R. Walker.
- BUGBROOKE, NORTHANTS.—
F. C. W. Hounsell.
- BUILTH, BRECON.—
A. R. Jones.
- BURGH, LINC.—
G. Cross.
- BURSLEDON, HANTS.—
H. Parson (retired).
- BURTON-ON-TRENT, STAFF.—
O. F. Frohwein.
- BURWASH, SUSSEX.—
W. Summerhayes.
- BURY ST. EDMUNDS, SUFF.—
A. H. Gibbon, J. S. Hinnell.
- BYFLEET, SURREY.—
J. J. Powell, H. S. Willson.
- CAERLEON, MON.—
C. W. De Gruchy.
- CAMBORNE, CORNWALL.—
A. Harris-Bickford, J. T. Thomas, J. H. Tonking.
- CAMBRIDGE.—
J. Colston, J. Hough, R. E. Nix, G. E. Wherry.
- CANE HILL, SURREY.—
A. N. Boycott, J. M. Moody, A. Rotherham.
- CAPEL, SURREY.—
J. L. Jardine.
- CARLISLE, CUMB.—
S. H. Hall.
- CARNARVON.—
R. H. Mills Roberts.
- CARSHALTON, SURREY.—
J. Wallace (retired).
- CASTLETON, YORKS.—
H. B. Shepherd.
- CHANDER'S FORD, HANTS.—
E. D. Ritchie.
- CHARLTON, KENT.—
H. L. Bernays.
- CHARTHAM, KENT.—
G. C. Fitz-Gerald.
- CHEDDAR, SOMERS.—
R. W. Statham.
- CHELTENHAM, GLOUC.—
C. E. Abbott, G. C. J. Phillips, E. G. Trevithick, J. H. Webster.
- CHERTSEY, SURREY.—
C. B. T. Langton.
- CHESTER.—
J. Duff.
- CHEW MAGNA, SOMERS.—
G. W. F. Bury, W. H. C. Shaw.
- CHIPPING CAMPDEN, GLOUC.—
J. H. Dewhurst.
- CHIPPING NORTON, OXF.—
A. Turle.
- CHISWICK, MIDDLESEX.—
G. Bate, G. V. Benson, G. W. Parker, R. Podmore.
- CHRISTCHURCH, HANTS.—
H. T. H. Mead, L. V. Tebbs.
- CHUDLEIGH, DEVON.—
H. H. L. Patch.
- CHURCH STRETTON, SALOP.—
H. Barnett.

- CLACTON-ON-SEA, ESSEX.—
P. Coleman.
- CLAYGATE, SURREY.—
A. B. How.
- CLEETHORPES, LINC.—
J. K. Pickford.
- CLEOBURY MORTIMER, SALOP.—
F. H. Thompson.
- CLIFTON, GLOUC.—
J. M. Clarke, D. S. Davies, N. C. Dobson, A. N. G. Gibbs, J. Gill, J. C. Heaven, S. Morgan, H. W. Saunders.
- CLITHEROE, LANC.—
A. W. Musson, W. E. Musson.
- COBHAM, SURREY.—
J. L. W. Kitching.
- COLCHESTER, ESSEX.—
A. Chopping, H. Laver, J. W. Laver, P. G. Laver, W. A. Maybury, E. G. Renny.
- COLNE, LANC.—
J. J. Ideson.
- COLSTON-BASSETT, NOTTS.—
W. Windley.
- COVENTRY, WARW.—
F. M. Haig.
- COWES, I.W.—
E. W. Paul.
- CRADLEY HEATH, STAFF.—
T. V. de Denne.
- CRANLEIGH, SURREY.—
J. Wood.
- CRAVEN ARMS, SALOP.—
E. Tredinnick.
- CRAWLEY, SUSSEX.—
T. H. Martin.
- CREDITON, DEVON.—
J. H. Lamb.
- CREWE, CHESH.—
W. Hodgson.
- CREWKERNE, SOMERSET.—
W. W. Webber.
- CROOKESMOOR, YORKS.—
C. S. Kilham.
- CROYDON, SURREY.—
A. B. Carpenter, T. A. Dukes, G. G. Genge, W. Rosser, T. Slipper, F. R. Walters, R. R. Wishaw, E. H. Willock, W. E. Woodman.
- CUCKFIELD, SUSSEX.—
A. E. Wells.
- CULLOMPTON, DEVON.—
J. H. Potter.
- DALTON-IN-FURNESS, LANC.—
C. Plant.
- DARTFORD, KENT.—
H. Croucher (retired).
- DAVENTRY, NORTHANTS.—
J. Terry.
- DEDDINGTON, OXFORD.—
H. Saunders.
- DEDHAM, ESSEX.—
C. E. D. Maile.
- DERBY.—
W. H. Allen, W. Benthall, C. A. Greaves, E. C. Green, T. Highton, C. H. Hough, G. S. Sims, J. A. Southern, F. B. Thornton.
- DEWSBURY, YORKS.—
J. Prior.
- DIDSBURY, LANC.—
W. W. Jones.
- DONCASTER, YORKS.—
M. J. Wakefield.
- DORCHESTER, DORSET.—
E. J. Day, A. Emson, W. R. Hanbury.
- DORKING, SURREY.—
C. W. Chaldecott.
- DOUGLAS, ISLE OF MAN.—
A. Haviland.
- DOVER, KENT.—
R. W. Ord.
- DOVERCOURT, ESSEX.—
H. Gurney.
- DRIFFIELD, YORKS.—
R. Wood.
- DROITWICH, WORC.—
T. Corbett.
- DROXFORD, HANTS.—
E. C. Pern.
- DUKINFIELD, CHESHIRE.—
J. R. S. Park.
- DUNSTABLE, BEDS.—
F. W. D. Henslowe.
- DURHAM.—
Rev. J. T. Fowler (retired).
- EASTBOURNE, SUSSEX.—
A. R. Barnes, C. H. H. Cameron.
- ECCLESTON, LANC.—
T. Fisher.
- EDMONTON, MIDDLESEX.—
C. D. Green.
- ENDERBY, LEICESTER.—
W. R. M. Berridge.
- ENFIELD, MIDDLESEX.—
J. J. Ridge.
- EPSOM, SURREY.—
E. G. C. Daniel.
- ERITH, KENT.—
J. C. M. Maynard.
- ESHER, SURREY.—
R. F. Walker.
- ETON, BUCKS.—
E. S. Norris.
- EVESHAM, WORC.—
J. S. Slater.
- EXETER, DEVON.—
H. Andrew, W. Ashford, A. Goulston, J. S. Perkins, R. V. Solly.

- FAIRFORD, GLOUC.—
D. Iles.
- FAREHAM, HANTS.—
H. D. Brook.
- FARNBOROUGH, HANTS.—
A. E. Price.
- FESTINIOG, MERIONETH.—
R. A. Mills Roberts.
- FISHPONDS, GLOS.—
W. R. Thurnam.
- FLEET, HANTS.—
G. H. Wickham.
- FLEETWOOD, LANC.—
W. H. Robinson.
- FOLKESTONE, KENT.—
W. T. Fernie, C. Latter, C. E. Priestley.
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Rev. J. Mitchell.

YORK.—

W. A. Evelyn, N. L. Hood, F. W.

Mason, A. W. Metcalfe, F. H.

Weekes.

SCOTLAND.

ABERDEEN.—

R. W. Reid, C. H. Usher.

DUMFRIES.—

W. D. Grieve.

EDINBURGH.—

T. W. Drinkwater, W. S.
Greenfield.

GLASGOW.—

R. D. MacGregor, D. Sinclair.

POLMONT, STIRLING.—

T. H. Lawrie.

STRANRAER, WIGTOWN.—

T. Easton.

IRELAND.

BAGNALSTOWN, CARLOW.—

J. J. Norton.

BELFAST.—

W. Calwell, R. C. McCullagh.

CLONMEL, TIPPERARY.—

J. Garner.

DOWNPATRICK, DOWN.—

W. Ranson.

DUNMURRY, ANTRIM.—

D. P. Gaussen.

KILLARNEY, KERRY.—

G. Stoker.

KNOCK, ANTRIM.—

J. K. Kerr.

LARNE, ANTRIM.—

D. P. S. Hill.

NEW ROSS, WEXFORD.—

G. B. Crawford.

FRANCE.

CANNES.—F. W. Giles.

NEUILLY-SUR-SEINE.—E. E. Barret.

VUE.—H. de Fonmartin.

GIBRALTAR.

J. E. Ker.

ITALY.

BORDIGHERA.—H. Danvers (Winter).

LUCCA, BATHS OF.—H. Danvers
(Summer).

SAN REMO.—A. J. Freeman.

MALTA.

VALETTA.—A. E. Mifsud.

MONACO.

W. A. Fitzgerald, R. E. Rouse.

CEYLON.

DIKOYA.—A. R. O. Milton.

CHINA.

HONG KONG.—A. M. Cowie, Ho Kai.

PINGYANG.—J. W. Hewett.

INDIA.

BARODA.—E. R. Dadachanji.

BHAGALPUR.—P. A. Rigby.

BOMBAY.—D. R. Wadia.

CALCUTTA.—W. Coulter, J. E. Panioty.

CINNAMARA.—J. Hewan.

HYLA KANDY.—D. Taylor.

KADUR.—A. S. Fernandes.

KARACHI.—S. M. Kaka.

MANNARGUDI.—H. Hudson.

MUKTESAR.—A. Lingard.

NAZIRA.—C. E. Caudle.

PESHAWUR.—A. C. Lankester, C. P.
Lankester.

QUETTA.—S. W. Sutton.

SAVANTVADI.—D. G. Dalgado.

SHARPUR.—W. Forrester.

SIMLA.—S. James.

JAPAN.

SHICHŌME.—M. Takayasu.

TOKIO.—K. Hayashi, Y. Saneyoshi,
S. Suzuki, K. Takaki, K. Totsuka.

STRAITS SETTLEMENTS.

PENANG.—Hon. W. C. Brown.

SINGAPORE.—M. F. Simon.

ULU PAHANG.—J. D. Gimlette.

TURKEY IN ASIA.

BAGDAD.—H. M. Sutton.

JERUSALEM.—P. C. E. D'E. Wheeler.

CAPE COLONY.

ALICEDALE.—C. Robertson.
 CALA.—Rev. F. W. Sutton.
 CAPE TOWN.—W. T. Pauling, P. C.
 Thomas, A. M. Wilson.
 CRADOCK.—A. King.
 KIMBERLEY.—W. S. Griffith.
 PORT ALFRED.—C. E. Jones.
 RONDEBOSCH.—E. S. Stevenson.
 VICTORIA WEST.—G. B. S. Darter.
 WOODSTOCK.—A. W. Caporn.

EGYPT.

CAIRO.—F. R. S. Milton, H. M. N.
 Milton, F. M. Sandwith, S. G.
 Toller.

GOLD COAST.

ACCRA.—E. Mattei.
 CAPE COAST CASTLE.—E. J. Hayford.
 LAGOS.—Prince Orisadipe, O. Sapara.

MADEIRA.

M. C. Grabham.

RHODESIA.

GWANDA.—W. Redpath.
 UMTALI.—F. E. Appleyard.

NATAL.

DURBAN.—L. A. J. Rouillard.
 ISIPINGO.—F. W. Greene.
 LADYSMITH.—J. A. A. Rouillard.

ORANGE FREE STATE.

BLOEMFONTEIN.—Rt. Rev. J. W.
 Hicks.

TRANSVAAL.

EUREKA CITY.—A. R. P. Saunderson.
 JOHANNESBURG.—A. D. Bensusan,
 W. D. Frayer, M. J. Longinotto.
 LYDENBURG.—W. Stokes.
 PRETORIA.—P. C. de Wet, T. L. Laxton.

BRITISH EAST AFRICA.

UGANDA.—A. D. McKinnon.

CANADA.

HALIFAX.—M. Chisholm.
 INNISFAIL.—H. George.
 KAMLOOPS.—T. W. Lambert.
 LONDON.—J. Wishart.
 MONTREAL.—C. R. Gillard, H. L.
 Reddy, F. J. Shepherd.
 NEW WESTMINSTER.—G. F. Bodington.
 PETERBOROUGH.—D. Fraser.

ST. JOHN.—F. P. Taylor.
 STANHOPE.—W. T. Ward.
 TORONTO.—W. H. Aikins, A. M.
 Baines.
 VANCOUVER.—D. B. Irving, G. D.
 Johnston.
 VICTORIA.—C. F. Newcombe.
 WINNIPEG.—J. W. Good.

NEWFOUNDLAND.

PILLEY'S ISLAND.—R. F. Hiley.
 ST. JOHN'S.—F. A. Stabb.

UNITED STATES.

CHICAGO.—W. Pocock.
 COLORADO SPRINGS.—S. E. Solly.
 HARTFORD, CONN.—J. W. Booth.
 LOS ANGELES, CALIF.—E. J. Cowen,
 J. Ellis.
 SAN FRANCISCO.—W. E. Ledyard.
 SYRACUSE.—F. W. Marlow.

WEST INDIA ISLANDS.

ANTIGUA.—F. E. Forward.
 BARBADOS.—R. B. Walcott.
 BERMUDA.—E. Harvey.
 JAMAICA.—J. L. C. Cox, M. Grabham,
 T. P. Madden.
 TRINIDAD.—W. F. Cleaver, R. H. E.
 Knaggs, S. F. Proctor, A. A.
 Rostant.

CHILI

LAGUNAS.—G. F. Cooper.

FALKLAND ISLANDS.

FORT DARWIN.—C. N. Foley.

FIJI.

BA.—G. W. A. Lynch.
 SUVA.—B. G. Corney.

NEW SOUTH WALES.

ANNANDALE.—J. B. McIlroy.
 ASHFIELD.—J. F. Deck.
 AUBURN.—F. H. Furnival.
 COOTAMUNDRA.—W. Hull.
 GOSFORD.—S. Fielder.
 GRAFTON.—M. H. Webster.
 HILLEND.—C. Mattei.
 HILLGROVE.—H. M. Massey.
 LYNTONSTOWE.—T. R. Lewers.
 NEWCASTLE.—J. Stride.
 RICHMOND.—W. M. Helsham.
 SYDNEY.—A. A. Cohen, C. J. Martin,
 W. L. Mathias, A. W. Munro,
 J. W. B. Wades.

NEW ZEALAND.

AMBERLEY.—G. W. Fitz-Henry.
 AUCKLAND.—A. E. Marsack.
 BLENHEIM.—G. Cleghorn.
 BRIGHTWATER.—E. D. Dunn.
 CHRISTCHURCH.—P. C. Fenwick.
 HASTINGS.—R. Nairn
 NAPIER.—H. F. Bernau, A. E. Ronald.
 NEW PLYMOUTH.—H. B. Leatham.
 WELLINGTON.—G. E. Anson, W. Fell.

QUEENSLAND.

GAYNDALE.—G. Davidson.
 LONGREACH.—H. S. Lindsay.
 NORMANTON.—W. E. Roth.
 SOUTHPORT.—A. B. Brockway.
 WARWICK.—A. O. H. Phillips.

SOUTH AUSTRALIA.

ADELAIDE.—L. W. Bickle, J. Hanson,
 E. W. Morris, B. Poulton, H. A.
 Sweetapple.

KENSINGTON.—S. Warren.
 MOONTA.—J. W. Keyworth.

VICTORIA.

BALLARAT.—H. H. Radcliffe.
 BRIGHTON.—C. F. Coxwell.
 CAMPERDOWN.—A. J. W. Pettigrew.
 GEELONG.—S. R. Robinson.
 MELBOURNE.—H. B. Forster, A. J. R.
 Lewellin, S. Plowman, J. F. Rudall,
 J. T. Rudall, G. Shirres.
 ST. KILDA.—E. L. Simmons.
 WARRNAMBOOL.—H. L. Miller.

**WESTERN
AUSTRALIA.**

FREMANTLE.—H. J. Lotz.
 KATAUNING.—F. M. House.
 LAWLERS.—W. J. Olivey.
 MARBLE BAR.—H. W. Nix.
 PERTH.—R. C. Benington, L. J.
 Miskin, E. Scott, E. P. Thurstan.

Medical Officers of the Naval, Military, and Indian Services.

- ADDISON, C. J. Surg.-Maj. Army.
 ALPIN, W. G. P. Surg.-Maj. I.M.S. Bengal.
 ARCHER, S. A. Surg.-Lt. Army.
 AVETOOM, S. T. Surg.-Maj. I.M.S. Bombay.
 BARKER, F. R. Surg.-Maj. Army.
 BATE, G. Surg. R.N. Retired.
 BENT, G. Surg.-Capt. Army.
 BOULGER, I. Surg.-Lt.-Col. Army.
 BRAKE, J. Surg.-Gen. I.M.S. Retired.
 BURDEN, H. Surg.-Capt. I.M.S. Bengal.
 BUTTERWORTH, S. Surg.-Maj. Army.
 CALVERT, J. T. Surg.-Capt. I.M.S. Bengal.
 CAMERON, C. Surg.-Lt.-Col. I.M.S. Bengal. Retired.
 CARR-WHITE, P. Surg.-Capt. I.M.S. Madras.
 CHEVERS, H. L. G. Surg.-Capt. Army.
 CLARKSON, F. C. Surg.-Capt. I.M.S. Bengal.
 CLARKSON, J. W. Surg.-Lt.-Col. I.M.S. Bombay.
 COAD, J. E. Surg. R.N.
 COLLINGWOOD, P. H. Surg.-Lt. Army.
 COLMAN, G. M. H. Surg.-Maj. Army. Retired.
 COOKSON, H. Surg.-Maj. I.M.S. Bengal. Retired.
 CORNWALL, J. W. Surg.-Lt. I.M.S.
 COWEN, W. A. D. Surg.-Maj. Army.
 DE LOM, H. A. Surg.-Capt. Army.
 DEWES, F. J. Surg.-Capt. I.M.S. Madras.
 DICKERSON, S. H. Brig.-Surg. Army. Retired.
 DURANT, R. J. A. Surg.-Capt. Army.
 DURSTON, J. C. Surg. R.N.
 EARLE, H. E. L. Surg. R.N. Retired.
 EDYE, J. S. Surg.-Capt. Army.
 FAWSETT, R. Surg.-Lt. Army.
 FISHER, J. Surg.-Capt. I.M.S. Bengal.
 FLETCHER, W. B. Fleet-Surg. R.N. Retired.
 FOOTNER, E. Brig.-Surg. Army. Retired.
 FREEMAN, E. C. Surg.-Capt. Army.
 GABBETT, P. C. Surg.-Capt. I.M.S. Madras.
 GIMLETTE, G. H. D. Surg.-Maj. I.M.S. Bengal.
 GIMLETTE, T. D. Fleet-Surg. R.N.
 GRAY, C. Surg.-Maj. Army. Retired.
 GROSE, S. Staff-Surg. R.N. Retired.
 HAINES, E. Surg. R.N.
 HAKIM, H. M. Surg.-Maj. I.M.S. Madras.
 HALL, J. L. Surg.-Maj. Army.
 HARRIS, F. A. Surg.-Maj. Army.
 HEATHER, B. G. Surg. R.N.
 HOOPER, A. W. Surg.-Lt. Army.
 HUNT, J. P. Surg.-Lt.-Col. Army.
 HUSKINSON, H. Surg. R.N.
 ILLINGWORTH, J. A. Brig.-Surg. Army. Retired.
 JAMES, C. H. Surg.-Capt. I.M.S. Bengal.
 JULIUS, H. A. Surg. R.N.
 KING, A. F. W. Surg.-Lt. I.M.S.
 LANCASTER, J. Surg.-Lt.-Col. I.M.S. Madras.
 LANDON, E. A.M.S. Retired.
 LEWTAS, J. T. Surg.-Lt.-Col. I.M.S. Bengal.
 LIGHTFOOT, W. S. Staff-Surg. R.N.
 LUARD, H. B. Surg.-Capt. I.M.S. Bengal.
 McDONNELL, J. O'M. Surg.-Lt.-Col. I.M.S. Bengal. Retired.
 MANLEY, W. G. N., C.B., V.C. Surg.-Gen. Army. Retired.
 MATURIN, B. A. Surg.-Maj. Army.
 MICHAEL, H. J. Surg.-Maj. Army.
 MOORE, H. M. Surg.-Capt. I.M.S. Bombay.
 MOORES, S. G. Surg.-Capt. Army.
 NAUTH, B. Surg.-Capt. I.M.S. Madras.
 ODDIE, S. I. Surg. R.N. Retired.
 OWEN, C. W., C.I.E., C.M.G. Surg.-Lt.-Col. I.M.S. Bengal.
 PERRY, E. L. Surg.-Lt. I.M.S. Bengal.
 PINTO, J. O. Surg.-Capt. I.M.S. Madras.
 POYNTER, G. F. Surg.-Maj. Army.
 PRALL, C. B. Surg.-Capt. I.M.S. Bengal.
 REILLY, C. C. Surg.-Maj. Army.
 ROBINSON, G. W. Surg.-Maj. Army.
 ROBINSON, S. C. B. Surg.-Maj. Army.
 ROCK, C. H. Surg. R.N.
 ROE, E. A. H. Surg.-Lt.-Col. Army. Retired.
 RORIE, J. Dep.-Insp.-Gen. R.N. Retired.
 SARKIES, S. C. Surg.-Maj. I.M.S. Madras.
 SINGH, B. J. Surg.-Capt. I.M.S., Bengal.
 SKARDON, T. G. Brig.-Surg. I.M.S. Bengal. Retired.
 SLAUGHTER, C. H. Insp.-Gen. R.N. Retired.
 SLAUGHTER, W. B. Brig.-Surg.-Lt.-Col. Army.
 STADDON, H. E. Surg.-Lt. Army.
 TODD, H. J. Mc C. Staff-Surg. R.N.
 TOWNSEND, H. W. W. Surg. R.N.
 TREVOR, H. O. Surg.-Maj. Army.
 WHISTON, P. H. Surg.-Capt. Army.
 WILES, J. Dep.-Surg.-Gen. Army. Retired.
 WILLIAMS, A. H. Surg.-Lt.-Col. I.M.S. Bengal.
 WILLIS, C. F. Surg.-Maj. I.M.S. Bombay.
 WOODHOUSE, T. P. Surg.-Maj. Army.
 WRIGHT, E. H. Surg.-Capt. I.M.S. Madras.
 WYSARD, A. T. Surg. R.N.

ALPHABETICAL LIST OF OLD STUDENTS OF ST. THOMAS'S HOSPITAL.

(The date indicates the year of entry.)

- ABBOTT, C. E. (1874). Harley House, Cambray, Cheltenham.
- ABBOTT, F. C. (1884). St. Thomas's Hospital. B.Sc., M.B., M.S. Lond., F.R.C.S.
w 1884-5. 1st Year Student, 1st Entrance Science Scholarship, The Wm. Tite Scholarship.
s 1885. 1st Year Student, 1st Coll. Prize.
w 1885-6. 2nd Year Student, The Peacock Scholarship.
w 1886-7. 3rd Year Student, 2nd tenure of Peacock Scholarship with 1st Coll. Prize.
w 1887-8. 4th Year Student, The Cheselden Medal;
Treasurer's Gold Medal.
H.P., H.S., A.H.S., Demonstrator of Anatomy Surgical Registrar and Resident Assistant Surgeon.
- ABEL, H. M. (1888). 10, King's Bench Walk, Inner Temple. B.A. Oxon.
- ACHARD, A. L. (1880). 9, Blandford St., Manchester Square. M.D. Brux.
- ACKERLEY, R. (1885). Croft House, The Hill, Surbiton, Surrey. M.A., M.B., B.Ch. Oxon.
- ACLAND, T. D. (1876). 74, Brook St., Grosvenor Square. M.A., M.D. Oxon.; F.R.C.P. Lond.; Physician, St. Thomas's Hospital; Physician, Brompton Hospital.
w 1877-8. 3rd Year Physical Society's Prize. Paper published in Hospital Reports, Vol. VIII.
w 1878-9. 4th Year Student, Mead Medal. Demonstr. of Pract. Med., Morb. Histol. and Pract. Physiol., H.S., H.P., R.A.
- ADAMS, E. J. (1863). Crow Tree House, Sheffield.
- ADAMS, W. (1840). 7, Loudoun Road, St. John's Wood. F.R.C.S.; Con. Surg. Gt. North. Cent. Hosp., Nat. Hosp. for Paral. and Epilep., and Nat. Orthop. Hosp.
- ADAMS, W. (1859). Fore Street, St. Clement's, Ipswich.
- ADDISON, C. J. (1872). Surg.-Maj. Army.
- ADDY, B. (1868). Stretton, Weld Road, Birkdale, Southport. M.D. Lond.
1869. 1st Year Student, 1st Coll. Prize;
Physical Society's 1st Year's Prize.
1870. 2nd Year Student, 1st Coll. Prize;
Physical Society's 2nd Year's Prize.
1871. 3rd Year Student, 1st Coll. Prize;
Prosecutor's Prize;
Treasurer's Gold Medal.
R.A., H.P.
- ADKINS, A. J. (1884). Lambeth Infirmary. M.D. Lond.
Clin. Asst. Skin Dept.
- ADKINS, P. R. (1888). 109, Freshfield Rd., Brighton. M.D., B.S. Durham.
- ADYE, W. J. A. (1880). Church House, Bradford-on-Avon, Wilts.
- AHLSWEDE, L. O. J. (1897). Red House, Mare Street, Hackney. M.D. Freiburg.
- AIKINS, W. H. (1881). 50, College Street, Toronto, Canada.
- AIR, A. C. (1863). 223, Selhurst Road, South Norwood.
- ALCOCK, G. H. (1891). The Beeches, Saxmundham, Suffolk.
- ALFORD, H. T. M. (1892). Bryn-y-mor, Weston-Super-Mare.
Obst. H.P.
- ALLCOCK, G. (1892). Lyndhurst, Stratford Road, Birmingham.
- ALLDEN, S. J. (1890). 32, West Allington, Bridport. M.D., B.S. Durham.
- ALLEN, W. H. (1890). Stuart Villa, Harrington Street, Derby. B.A., M.B., B.C. Cantab.
- ALLFREY, F. H. (1895). B.A., M.B., B.C. Cantab.
- ALLINGHAM, J. H. (1858). 76, Gayville Road, Wandsworth Common.
- ALLINGHAM, W. (1851). 59, Marina, St. Leonards-on-Sea. F.R.C.S.
1854. Descriptive Anatomy, Prize;
Surgery, Prize.
1855. Medicine, Prize;
Clinical Medicine, President's Prize;
Clinical Medicine, Treasurer's Prize.
Surgical Tutor, Demonstrator of Anatomy, and Surgical Registrar.
- ALLIOTT, A. J. (1869). The Vine, Sevenoaks, Kent. B.A., M.D. Cantab.

- ALPIN, W. G. P. (1877). Surg.-Maj. Bengal Army. M.D. Brux. Demonst. of Pract. Surg.
- ANDERSON, G. R. (1883). 18, Hoghton Street, Southport. F.R.C.S. R.A., A.H.P.
- ANDERSON, J. R. (1883).
- ANDERSON, M. J. B. (1889). 120, Lavender Hill.
- ANDERSON, W. (1864). 2, Harley St., Cavendish Square. F.R.C.S.; Surgeon, Lect. on Anat., and Surg. Skin Departm., St. Thomas's Hospital; Professor of Anatomy to the Royal Academy, Consulting Surgeon to the Hampstead General Hospital and Sevenoaks Hospital for diseases of the Hip, Member of the Court of Examiners at the Royal College of Surgeons; Exam. in Surg. Univ. Lond., and Conjoint Board.
1865. 1st Year Student, 3rd Coll. Prize.
1866. 2nd Year Student, 3rd Coll. Prize.
1867. 3rd Year Student, 1st Coll. Prize; Physical Society's 3rd Year's Prize; Cheselden Medal.
Surg. Registr., Demonstrator of Anatomy. H.S., R.A.
- ANDRÉ, J. E. F. (1886). The Gorse, Sidlesham, Chichester.
- ANDREW, H. (1884). 10, Southernhay East, Exeter.
- ANDREWS, C. H. (1880). Willow Lane, Norwich.
- ANDREWS, R. (1879). Chestnut Grove, New Malden, Surrey.
- ANNESLEY, W. O. T. (1871). 11, Castle Road, Southsea.
- ANNESS, F. R. (1877). 32, Berners Street, Ipswich.
- ANSON, G. E. (1886). The Terrace, Wellington, New Zealand. M.D., B.C. Cantab.
H.S., A.H.S., R.A.
- ANTHONY, T. G. (1842). Tredegar, Monmouthshire.
- APPLETON, G. (1842). Park Braws, Lizard, Helston, Cornwall (retired).
- APPLETON, H. (1838). 21, Elmdale Road, Tyndall's Park, Bristol (retired). M.D. Aberd.
- APPLEYARD, F. E. (1891). Umtali, Mashonaland. B.A., M.B., B.C., Cantab.
Clin. Asst. Throat Dept.
- ARCHER, S. A. (1893). Surg.-Lt. Army.
- ARMSTRONG, H. G. (1871). Wellington College, Berks.
w 1874. 3rd Year Student, 3rd Coll. Prize.
- ARNISON, W. D. (1887). 2, Saville Place, Newcastle-on-Tyne. M.D., B.S. Durham.
- ARNOLD, E. G. E. (1888). 82, Park Street, Grosvenor Square. M.R.C.P. Lond., M.B., B.S., Durh. Obst. H.P.
- ARNOLD, G. J. (1888). F.R.C.S. Late Surg. P. & O.
H.S., A.H.S., Clin. Asst. Throat Dept.
- ASH, J. (1892).
- ASHE, W. P. (1872). 23, Cadogan Gardens, Chelsea. M.D. Durh.
- ASHFORD, W. (1890). Devon and Exeter Hospital.
- ATKEY, P. J. (1885). 50, Bellevue Road, Southampton. D.P.H. Camb. Late Surg. P. & O.
H.S., A.H.S., Clin. Asst. Throat, Ear and Skin Depts.
- ATKINSON, A. E. (1894). 3, Southampton Street, Strand. D.P.H.
- ATKINSON, F. P. (1860). Claremont Road, Surbiton, Surrey. M.D., C.M., Aberd.; M.R.C.P. Edin.
- AUBIN, T. J. (1854). 39, La Motte Street, St. Helier's, Jersey. M.D. St. And.
- AVELING, C. T. (1862). Cedar House, 136, Stamford Hill. M.D., M.S. Lond.; F.R.C.S.
1863. Matriculation Examination — Physics and Natural History, 1st Coll. Prize;
1st Year Student, 1st Coll. Prize.
1864. 2nd Year Student, 2nd Coll. Prize.
1865. 3rd Year Student, 3rd Coll. Prize.
H.S.
- AVETOOM, S. T. (1876). Surg.-Maj. Bombay Army.
- BABINGTON, S. N. (1892).
s 1894. 2nd Year Student, 1st Coll. Prize.
A.H.S., H.S., Ophth. H.S.
- BAIN, W. (1896). Straythorpe, York Place, Harrogate. M.D. Durh., M.R.C.P., Lond., F.R.C.S.E.
- BAINES, A. M. (1878). Toronto, Canada.
- BAKER, A. (1891). 25, Falkner Street, Liverpool. M.B., B.S. Durham.
- BAKER, W. H. (1880). 152, Westbourne Grove.
- BALLANCE, C. A. (1875). 106, Harley St., Cavendish Square. M.B., M.S. Lond.; F.R.C.S.; Assistant Surgeon, Surgeon for Diseases of the Ear, and Teacher of Practical and Operative Surgery, St. Thomas's Hospital, Assistant Surgeon to the Hospital for Sick Children, Great Ormond Street; Surg. National Hosp., Queen Square.
w 1876-7. 3rd Year Student, 3rd Coll. Prize, and Physical Society's 3rd Year's Prize.
1880. The Solly Medal and Prize.
Surgical Registrar, Demonstrator of Anatomy
H.P., H.S., A.H.S., A.H.P., R.A.

- BALLANCE, J. DES C. (1881). 155, Hagley Road, Edgbaston, Birmingham. R.A.
- BANHAM, Rev. H. F. (1870). Tudendenham Vicarage, Ipswich (retired). M.A., M.D. Cantab.
- BANHAM, W. W. (1882). 147, Abbeydale Road, Sheffield.
- BANKS, A. (1887). West Hill Tower, Ryde, Isle of Wight. F.R.C.S., D.P.H.
w 1887-8. 1st Year Student, 1st Coll. Prize.
s 1890. 3rd Year Student, 2nd Coll. Prize.
w 1890-1. 4th Year Student, The Cheselden Medal.
H.S., A.H.S., Asst. Demonstr. of Pract. Surg., Clin. Asst. Skin Dept., Jun. and Sen. Obst. H.P.
- BARBER, H. V. (1878). 130, Queen's Road, Finsbury Park. M.A. Cantab.
- BARKER, E. M. (1892). 63, Warrior Square, St. Leonards-on-Sea. B.A., M.B., B.C. Cantab.
- BARKER, F. (1884). Heighington, Linc.
- BARKER, F. R. (1872). Surg.-Maj., Army. M.B. Lond., D.P.H.
- BARNES, A. R. (1869). Meads Place, Meads, Eastbourne, Sussex. M.D. Edin.
- BARNES, J. A. (1893).
- BARNES, J. S. (1891).
- BARNES, R. Conservative Club, and Lingwood, Liss, Hants (retired). M.D., F.R.C.P. Lond.; Luml. Lect.; Censor; F.R.C.S.; F.R.C.P.I. (Hon.). Formerly Obst. Phys. and Lect. on Obst., Lond., St. Thos. and St. Geo. Hosps, and Exam. Univ. Lond., R.C.P. Lond., and R.C.S. Eng.
- BARNES, R. S. F. (1870). 7, Queen Anne Street, Cavendish Square. M.D., C.M. Aberd.; M.R.C.P. Lond., F.R.S.E. Sen. Phys. Roy. Matern. Charity.
- BARNETT, H. (1883). Burway House, Church Stretton, Salop. M.A., M.B., B.C. Cantab.
- BARON, T. (1863). Ulceby, Linc. H.S.
- BARRACLOUGH, H. C. (1891). London Road South, Lowestoft. B.A., M.B., B.C. Cantab.
- BARRET, E. E. 11, Rue de l'Hotel de Ville, Neuilly, Paris, France. M.D. Brux., M.D. Paris.
- BARRETT, J. J. (1859). 170, Ramsden Road, Balham. M.D. St. And.
- BARRS, J. H. (1885). 6, Wandsworth Bridge Road, Fulham.
- BARTON, P. F. (1894). 1, Sunnyside, Ridgway, Wimbledon. B.A. Cantab.
- BARWELL, R. (1845). 55, Wimpole Street, Cavendish Square. F.R.C.S.; Consulting Surgeon to Charing Cross Hospital.
1850. Clinical Medicine, Prize.
H.S., Demonstr. of Anat.
- BASHALL, C. E. (1884). Lower Knole, Kingsbridge, Devon.
- BATE, G. (1871). 31, Linden Gardens, Chiswick. Late Surg. R.N.
- BATHURST, L. (1881). 8, Salop Road, Oswestry.
- BATTLE, W. H. (1873). 2, Mansfield Street, Cavendish Square. F.R.C.S., Asst. Surgeon and Teacher of Practical and Operative Surgery, St. Thomas's Hospital and Surgeon Royal Free Hospital.
w 1875. 2nd Year Student, 3rd Coll. Prize.
w 1876-7. 3rd Year Student, The First Solly Medal and Prize.
Resident Assistant Surgeon, Surgical Registrar, H.S., H.P., A.H.P., R.A.
- BATTYE, J. H. (1872). 84, Belgrave Road. M.D.R.U.I. A.H.P.
- BAXTER, S. E. (1885). 163, Grove Lane, Camberwell.
- BAYLISS, R. A. (1884). Royal Mineral Water Hospital, Bath.
- BEARDSLEY, A. (1843). The Towers, Grange-over-Sands, Lanc.
- BEDDOES, T. P. (1882). 26, North Parade, Aberystwith. B.A., M.B., B.C. Cantab.; F.R.C.S.
Clin. Asst. Skin Dept.
- BEDFORD, C. F. (1864). New Sleaford, Linc.
- BEDFORD, R. J. (1855). Kegworth, Leic. R.A.
- BELFRAGE, S. H. (1896).
- BELL, C. W. J. (1878). 61, Uppgate, Louth, Linc.
- BELL, E. S. (1883). Asst. Med. Off. St. Olave's Union Infirm., Lower Road, Rotherhithe.
- BELL, J. A. (1865). Deravona, Watts' Avenue, Rochester, Kent. H.S., R.A.
- BELL, J. V. (1858). Star Hill, Rochester Kent. M.D. St. And., F.R.C.S. H.S., R.A.
- BELL, R. H. (1895). M.A., M.B., B.C. Cantab. H.P.
- BENINGTON, R. C. (1872). Perth, Western Australia. M.D., B.S., L.S.Sc. Durh. H.P., A.H.P., R.A.
- BENNETT, A. W. 6, Park Village East, Regent's Park. M.A., B.Sc. Lond. Lecturer on Botany.

- BENNETT, H. S. (1868). 53, Upper Berkeley Street, Portman Square, and 2, Birchin Lane. M.B. Cantab. R.A.
- BENNETT, W. G. (1892). Lowesmoor Villa, Worcester.
- BENSLEY, E. C. (1858). 127, Fellows Road, South Hampstead. F.R.C.S.
- BENSON, G. V. (1888). 13, Queen Anne's Grove, Bedford Park, Chiswick. M.A. Cantab.
- BENSUSAN, A. D. (1887). Johannesburg. M.D. Brux.
- BENT, G. (1879). Surg.-Capt., Army.
- BENTHALL, W. (1877). 102, Friar Gate, Derby. B.A., M.B. Cantab.
- BERNAU, H. F. (1885). Napier, New Zealand.
Clin. Asst. Throat Dept.
- BERNAYS, A. V. (1875). Solihull, Warwk. B.A., M.B. Cantab.
w 1880-1. 3rd Year Student, 1st Coll. Prize.
- BERNAYS, H. L. (1871). Rivoli, Old Charlton, Kent.
w 1873. Prosector's Prize.
- BERNAYS, S. A. (1870). Church House, 185, St. Leonard's Road, Bromley by Bow.
- BERRIDGE, W. R. M. (1884). Enderby, near Leicester.
- BEVILLE, F. W. (1884). 19, New Cavendish Street.
Clin. Asst. Skin Dept.
- BIBBY, J. (1876). Withy House, Bamber Bridge, Lanc.
- BICKLE, L. W. (1877). North Terrace, Adelaide, S. Australia. F.R.C.S. Edin.
s 1878. 1st Year Student, 3rd Coll. Prize.
s 1879. 2nd Year Student, 1st Coll. Prize.
H.P.
- BIDDLE, D. (1859). Charlton Lodge, Kingston-on-Thames.
1860. 1st Year Student, Treasurer's Prize ;
Matriculation Exam., Prize.
H.S.
- BIDWELL, L. A. (1882). 59, Wimpole Street, Cavendish Square. F.R.C.S. H.S., A.H.S.
- BIGGAM, W. (1886). 15, The Oaks, Sunderland. M.A., M.B. Durh.
- BIGGER, W. G. (1883). Aberfoyle, Streatham Common. B.A.R.U.I., M.B., M.Ch.
- BILLSON, C. (1887). 28, Hornsey Pk. Road.
- BINCKES, F. W. (1891). Hill Side, Overhill Road, East Dulwich.
Clin. Asst. Electrical Dept.
- BINGHAM, S. O. (1892).
w 1897-8. 5th Year Student. The Cheselden Medal.
- BIRD, G. W. H. (1890). Bridgwater, Som. B.A., M.B., B.C. Cantab.
H.P., Clin. Asst. Skin Dept.
- BIRD, W. V. (1870). Percy Villa, St. Margaret's, Twickenham (retired). M.D. Aberd., M.R.C.P.
- BLABER, P. L. (1890). Sunnybank, Shoot-up-Hill, Brondesbury.
Obst. H.P., Clin. Assist. Throat Depart.
- BLACK, J. (1870). The Avenue, Beulah Hill, Norwood. B.A., M.B. Cantab., F.R.C.S., Lect. on Anat. Westm. Hosp.
w 1872. 2nd Year Student, Prosector's Prize.
H.S.
- BLACK, W. S. (1854). Stockland, Honiton, Devon.
- BLACKER, A. B. (1879). 15, West Eaton Place, Eaton Square. M.D., B.S. Durh. Supt. of the X Ray Dept. St. Thomas's Hospital ; Tel.: Sciomaney.
Clin. Asst. Ear, Throat and Electrical Depts.
- BLADES, C. C. (1853). 171, Kensington Park Road. M.D. St. And.
- BLAIKIE, A. B. (1885). Oswestry, Salop. M.A., M.B., B.C. Cantab.
- BLAIR, C. S. (1889). Fulwood, Kew Gardens, Surrey. M.D. Durh.
- BLAKE, T. W. (1857). Hurstbourne, Bournemouth, Hants. M.D. St. And.
- BLAKEMAN, C. J. (1885). Res. Med. Off., City Hosp., South Grafton Street, Liverpool.
- BLAKISTON, F. C. (1892).
- BLOUNT, G. B. C. (1889). Hospital for Women, Waterloo Road.
Clin. Asst. Ear and Electr. Depts.
- BLUNSOM, J. (1873).
- BLUNT, A. H. (1884). 133, King Richard's Road, Leicester.
- BODINGTON, G. F. (1885). Provincial Asyl., New Westminster, British Columbia. M.D. Durh. ; M.R.C.P. Lond., F.R.C.S.
- BOND, B. W. (1886). Glenside, Godalming. M.B., B.S. Durh.
- BOND, C. K. (1879). D.P.H.
- BOND, W. A. (1884). Holborn Town Hall. M.A., M.D., B.C., D.P.H. Cantab., M.R.C.P.
R.A., Clin. Asst. Throat Dept.
- BOOTH, E. J. H. (1865).
- BOOTH, J. W. (1863). Hartford, Connecticut, U.S.A.
- BOSTOCK, L. (1891). Merefield House, Haslington, Crewe.
- BOTT, W. G. (1871). 61, Kennington Park Road. J.P.
- BOUCK, J. A. (1887). 447, Battersea Park Rd.

- BOULGER, I. (1869). Surg.-Lt.-Col., Army.
 1870. 1st Year Student, Sir Wm. Tite's Scholarship.
 1871. 2nd Year, Sir Wm. Tite's Scholarship.
 w 1872. 3rd Year, Sir Wm. Tite's Scholarship.
 H.S., R.A.
- BOWEN, R. E. A. (1874). 285, Cambridge Road, Bethnal Green.
- BOWRING, W. A. (1887). The Cottage, Lovelace Road, Surbiton. F.R.C.S. H.P., Jun. and Sen. Obst. H.P.
- BOX, C. R. (1884). St. Thomas's Hospital. M.D., B.S., B.Sc. Lond., M.R.C.P., F.R.C.S., Resident Assist. Physician.
 w 1885-6. 1st Year Student, 2nd Coll. Prize. H.S., A.H.S., Res. H.P., Clin. Asst. Ear Dept., Medical Registrar and Demonstr. of Practical Medicine.
- BOYCOTT, A. N. (1884). Asst. Med. Off. Lond. Co. Asyl., Cane Hill, Purley, Surrey. M.D. Lond.
 H.S., A.H.S., R.A., Clin. Asst. Skin Dept.
- BOYER, J. J. W. R. (1866). Stoney-croft, Earley, Reading. M.D. Heidelb.
- BOYS, A. H. (1871). Chequer Lawn, St. Alban's, Herts.
- BRACEY, H. R. (1870). 115, Bristol Road, Edgbaston, Birmingham.
- BRADDON, C. H. (1857). Ryecroft House, Cheetham Hill, Manchester. M.D. St. And., J.P.
 R.A.
- BRAKE, J. (1850). 1, St. Leonards Road, Ealing. Surg.-Gen. I.M.S. (retired).
 1851. 1st Year Student, Scholarship.
 1852. 2nd Year, Student, Scholarship. Physiology, Prize.
 1853. 3rd Year Student, Scholarship. Clin. Med., Treasurer's Prize. Midwifery, Prize. Forensic Medicine, Prize.
- BRACKENRIDGE, F. J. (1889). St. Oswald's House, Stony Stratford, Bucks.
 H.P., Clin. Assist. Electr. Dept.
- BRETON, L. M. (1888). Glendale, Portswood, Southampton.
- BRINGLOE, J. (1848). 41, Milkwood Road, Herne Hill.
- BRISLEY, C. W. (1884). 135, London Road, St. Leonard's-on-Sea.
- BRISTOW, G. H. (1884.) F.R.C.S.I., M.D. Brux.
 Clin. Asst. Throat and Ear Depts.
- BRISTOWE, H. C. (1882). Wrington, Somerset. M.D. Lond.
 H.P., Ophth. H.S., A.H.S.
- BROCK, C. DE L. (1871). Alstone Lawn, Tooting Graveney.
- BROCK, J. (1871). 28, Wilbury Road, Hove, West Brighton.
- BROCKATT, A. A. (1881). Hazeldean, Malvern, Worc. M.D. Brux.
 R.A., H.P., Clin. Asst. Skin, Throat and Ear Depts.
- BROCKWAY, A. B. (1881). Southport, Queensland.
- BRODIE, T. Gregor. (1895). Lindfield, Uxbridge Road, Surbiton. M.D. Lond. Lecturer on Physiology, St. Thomas's Hospital. Examiner in Physiology for the Fellowship R.C.S.
- BROMET, E. (1889). St. John's, Redhill. M.A. Cantab.
- BROOK, H. D. (1881). Fareham, Hants. D.P.H.
- BROOK, W. F. (1881). Longlands House, Swansea. F.R.C.S.
 H.S., A.H.S., Clin. Asst. Ear, Skin and Throat Depts.
- BROOKS, C. (1885). Gold Hill, Gerrard's Cross, Bucks.
- BROWN, F. G. (1859). 17, Finsbury Circus.
 1861. 2nd Year Student, 3rd Coll. Prize.
 1862. 3rd Year Student, 3rd Coll. Prize.
- BROWN, G. W. (1890). 10, Westminster Bridge Road.
- BROWN, L. D. (1878). Henley Villa, Ealing.
- BROWN, T. H. (1894). M.A., M.B., B.C. Cantab.
- BROWN, The Hon. W. C. Hardwick, Penang. M.D., C.M. Aberd.
- BROWNE, E. A. (1863). 39, Rodney St., Liverpool. F.R.C.S. Edin. Lect. on Ophth. Univ. Coll. Liverpool.
- BRUCE, R. M. (1877). Med. Superint., West. Hosp., Seagrave Rd., Fulham.
- BRYAN, F., (1879). Senior Asst. Med. Off. Lond. Co. Asyl., Colney Hatch. M.B. Durh.
- BUCKLEY, T. W. (1877). Thrapston House, Thrapston, Northants.
- BULL, H. A. (1890). Birch Hall, Ingestre, Staffs.
- BULLEN, F. ST. J. (1880). 12, Pembroke Road, Clifton, Bristol.
- BULLOCK, H. M. (1879). Overtown House, Spring Grove, Isleworth.
- BULSTRODE, H. T. (1881). Local Govt. Bd., Whitehall. M.A., M.D. Camb., D.P.H.
 H.P., A.H.P., Clin. Asst. Throat, Skin and Ear Depts.
- BURD, G. V. (1873). Okehampton, Devon.
- BURDEN, H. (1886). Surg.-Capt. I.M.S. Bengal. F.R.C.S.
 w 1886-7. 1st Year Student, The William Tite Scholarship.
 s 1887. 1st Year Student, 2nd Coll. Prize.
 w 1887-8. 2nd Year Student, 2nd Coll. Prize.
 H.S., A.H.S.

- BURNS, A. H. (1877). 3, Josephine Avenue, Brixton Hill.
- BURTON, C. F. (1885). 1, Crescent Place, Whitby, Yorks.
- BURY, A. T. (1870). Sheen, Ashbourne, Derbyshire.
- BURY, G. W. F. (1853). Chew Magna, Somers. F.R.C.S.
- BUTLER, G. R. (1877). 31, Carlton Vale, Kilburn.
- BUTTERWORTH, S. (1878). Surg.-Maj., Army.
- BUZZARD, E. F. (1894). 74, Grosvenor Street. B.A., M.B., B.Ch. Oxon.
w 1897-8. 5th Year Student, the Mead Medal.
- BYERS, D. W. (1845). 1, Summerhill Road, Maindee, Newport, Mon.
- BYHAM, W. L. (1879). 15, High Street, Spalding, Linc.
- CADE, H. L. (1880). Albert Villa, 2, Queen's Road, Peckham.
- CAIGER, F. F. (1878). Med. Superint. S.W. Fever Hosp., Stockwell. M.D., B.S., M.R.C.P., Lond.; D.P.H. Cantab.
w 1879-80. 1st Year Student, 3rd Coll. Prize.
w 1880-1. 2nd Year Student, 3rd Coll. Prize.
w 1882-3. 4th Year, the Mead Medal.
H.S., A.H.S., H.P., A.H.P., R.A.
- CALVERT, J. T. (1882). Surg.-Capt. Bengal Army. M.B. Lond.; D.P.H. H.P., H.S., A.H.S.
- CALWELL, W. (1884). 1, College Square, North Belfast. M.A., M.D., M.Ch., R.U.I.
- CAMERON, C. (1858). Surg.-Lt.-Col., I.M.S. Bengal (retired).
- CAMERON, C. H. H. (1871). Kolassy House, Old Town, Eastbourne. D.P.H. R.A.
- CAMERON, W. J. Ellerslie, Balham Park Road. M.B. Lond.
- CAMPBELL, A. J. (1888). 74, Barcombe Avenue, Streatham Hill.
- CANDLER, G. (1891). Harleston, Norfolk. B.A. Cantab. Obst. H.P.
- CANN, R. T. (1880). Osborne Villa, Fowey, Cornwall.
s 1882. 2nd Year Student, 1st Coll. Prize.
s 1883. 3rd Year Student, 2nd Coll. Prize.
- CANNOCK, C. W. (1873). Counser Villa, Balham High Road.
- CAPORN, A. W. (1885). Woodstock, Cape Town.
- CARPENTER, A. B. (1876). Wykeham House, Bedford Park, Croydon, Surrey. M.A., M.B. Oxon. H.P., A.H.P., H.S.
- CARPENTER, E. (1861). Trevathan, Albemarle Road, Beckenham, Kent.
- CARPENTER, G. (1878). 12, Welbeck Street, Cavendish Square. M.D. Lond.; M.R.C.P.
w 1880-1. 1st Year Student, 3rd Coll. Prize.
s 1881. 1st Coll. Prize.
w 1881-2. 2nd Year Student, 3rd Coll. Prize; Prosecutor's Prize.
- CARPENTER, J. W. (1853). Goudhurst, Kent. M.D. St. And.
- CARR-WHITE, P. (1889). Surg.-Capt. Madras Army. M.B., C.M. Edin.
- CARSTAIRS, H. J. (1884). Chiswell Lodge, Worcester Park, Surrey. Clin. Asst. Throat Dept.
- CARTER, A. W. (1889). M.B., C.M. Edin.
- CARTER, W. (1863). 78, Rodney Street, Liverpool. M.D., B.Sc., LL.B., F.R.C.P. Lond.; F.R.C.S.I.; J.P.
- CARTER, W. R. (1886). 23, Jury St., Warwick. M.A., M.B., B.C. Cantab. R.A., S.O.C.
- CARVER, J. R. (1890). The Meadows, Alderley Edge. B.A., M.B., B.C. Cantab. Clin. Asst. Skin Dept.
- CASTLE, H. (1874). 99, The Mall, Newport, I.W. M.B. Lond.
w 1874-5. 1st Year Student, 2nd Coll. Prize.
s 1875. 3rd College Prize.
w 1876-7. Physical Society's 3rd Year's Prize.
H.S., A.H.S., R.A.
- CAUDLE, A. W. W. (1856). Henfield, Sussex. 1858. Clinical Medicine, Prize.
- CAUDLE, C. E. (1858). Nazira, Assam, India.
- CAUDWELL, E. (1886). Harleston, Norfolk.
- CAVE-BROWN-CAVE, H. W. (1891). Lifford Hall, King's Norton, Worc.
- CHAFFERS, E. (1860). Broomfield, Keighley, Yorks. F.R.C.S.
- CHALDECOTT, C. W. (1848). Parkside, Dorking, Surrey.
1849. Materia Medica, 2nd Prize; 1st Year Student, Scholarship.
1850. Surgery, Prize.
1851. Physiology, Prize; Physical Society's Essay, Treasurer's Prize; General Proficiency, Treasurer's Silver Medal.
- CHALDECOTT, J. H. (1880). Madgehill, Hanwell.
- CHAMBERS, J. M. (1891). Craigside, Llandudno.
- CHANCE, R. F. (1887). 22, Carlton Crescent, Southampton. Obst. H.P.
- CHAPMAN, G. W. (1884). 98, New Walk, Leicester.
- CHARLES, J. R. (1895). B.A., M.B., B.C. Cantab.

- CHARPENTIER, A. (1879). Rathmines House, Uxbridge, Middlx. M.D. Durh.
1882-3. 4th Year, The Mead Medal Exam., Special Mention.
- CHARSLEY, R. S. (1888). The Barn, Slough, Bucks. B.A. Oxon.
- CHEVALLIER, C. L. (1889).
- CHEVERS, H. L. G. (1879). Surg.-Capt. Army.
- CHILD, G. A. (1891). Selsey, Sussex.
- CHISHOLM, M. (1885). Halifax, Nova Scotia, Canada.
- CHOPPING, A. (1890). Middle Mill, Colchester.
- CHRISTIE, F. (1886).
- CHURCHILL, F. (1867). 4, Cranley Gardens, Queen's Gate. M.D., C.M. Edin.; F.R.C.S.
Surg. Registr.
- CLAPTON, E. (1850). 22, St. Thomas's Street, Southwark, and Towercroft, Lee. M.D., F.R.C.P., F.R.C.S.
1851. 1st Year Student, 1st Scholarship; Descriptive Anatomy Prize; Chemistry, Prize.
1852. 2nd Year Student, Scholarship; Physiology, Prize; Materia Medica, Prize; Botany, Prize.
1853. 3rd Year Student, Scholarship; Clinical Medicine, Treasurer's Prize; Physical Society's Essay, Treasurer's Prize.
1854. Ophthalmic Reports, Governor's Prize; Clinical Medicine, Mr. N. Smith's Prize.
Physician and Lecturer on Materia Medica.
- CLAPTON, W. (1854). 27, Queen Street, Cheapside. F.R.C.S.
1855. Materia Medica, Prize.
1856. Clinical Medicine, Prize.
- CLARK, F. (1868). Crosby House, Gt. St. Helens, Bishopsgate.
- CLARK, H. J. (1887). Erceldoune, Swanage, Dorset.
- CLARKE, A. (1855). Stock, Ingatestone, Essex.
- CLARKE, A. W. V. (1890). 100, Stondon Park, Honor Oak Park.
- CLARKE, J. M. (1884). 28, Pembroke Road, Clifton, Bristol. M.A., M.D. Cantab., F.R.C.P. Physn. and Pathol. Bristol Gen. Hosp., Prof. of Path. Bristol Med. Sch.
H.P.
- CLARKE, J. T. (1884).
- CLARKSON, F. C. (1880). Surg.-Capt. Bengal Army.
- CLARKSON, J. W. (1870). Surg.-Lt.-Col. Bombay Army.
H.P., H.S.
- CLEAVER, W. F. (1879). Clarence Street, Port of Spain, Trinidad.
- CLEGHORN, G. (1868). Blenheim, Marlboro', New Zealand. M.D. Durh.
H.S.
- CLEMENTS, W. H. (1879).
- CLIFTON, G. (1866). 48, London Road, and 7, Bowling Green Street, Leicester. J.P.
- CLOWES, J. P. (1884). Asst. Med. Off. Co. Asyl., Prestwich, Manchester.
- CLUTTON, H. H. (1872). 2, Portland Pl. M.A., M.B., M.C. Cantab.; F.R.C.S. Surgeon and Lect. on Surgery, St. Thomas's Hospital.
Res. Asst. Surg., Surg. Reg., H.S.
- COAD, J. E. (1886). Surg. R.N. M.B. Durh.
- COATES, W. H. (1868). Hucknall Torkard, Notts.
- COBB, E. H. (1891).
A.H.S., Clin. Asst. Skin Dept.
- COBBETT, L. (1886). Fairfield, Weybridge. M.A., M.B. Cantab.; F.R.C.S.; late Demonstr. of Pathol. Univ. Camb.
H.S., A.H.S., H.P.
- COCKELL, F. E., Jun. (1872). Holly Lodge, Forest Road, Dalston.
Merchant Taylors' Scholar.
- COGILL, H. (1886). The Crossways, Cranes Park Road, Surbiton.
- COHEN, A. A. (1877). 61, Darlinghurst Road, Sydney, N.S. Wales. M.D. Aberd.
- COLBY, G. (1857). Brawby Park, Pickering, Yorks.
- COLBY, W. T. (1848). The Mount, Malton, Yorks. M.D. St. And.; J.P.
- COLEMAN, P. (1884). Dudbrook House, Clacton-on-Sea. M.B., B.S. Durh.
- COLLCUTT, A. M. (1886). 2, St. Peter's Place, Brighton. M.A., M.B., B.C. Cantab.
H.P. Clin. Asst. Ear Dept.
- COLLIER, H. (1882). 21, South Quay, Gt. Yarmouth. M.D. Brux.
- COLLIER, M. P. M. (1874). 133, Harley St., Cavendish Sq. M.S., M.B. Lond.; F.R.C.S.
H.S., A.H.S., A.H.P.
- COLLIER, S. R. (1889). Clarence Villa, Hartfield Rd., Wimbledon. M.D., M.Ch. R.U.I.
- COLLIER, W. A. (1892). 36, Gt. Smith St., Westminster.
- COLLINGWOOD, P. H. (1889). Surg.-Lt. Army.
- COLLIS, E. L. (1893). Swinford House, Stourbridge. B.A., M.B., B.Ch. Oxon.
w 1895-6. Bristowe Medal.
Obst. H.P.

- COLMAN, G. M. H. (1877). Surg.-Maj. Army (retired). M.A., M.B. Cantab.
- COLSTON, J. (1855). 189, Mill Road, Cambridge.
- CONFORD, G. J. (1892). The Coppice, Nottingham. B.A., M.B., B.Ch. Oxon. H.P., H.S., A.H.S., Clin. Asst. Elect. Dept.
- CONNER, J. R. T. (1888). 413, Kingsland Road. B.A.R.U.I., M.D., M.Ch.
- COOK, P. I. (1873). Byfield, High St., Bromley, Kent. M.D. Brux.
- COOK, R. (1864). Leiston, Suffolk. M.D. Glasg.
- COOK, S. B. (1882). Askam-in-Furness, Lancs. B.A., Cape of Good Hope; M.D. Lond.
s 1883. 1st Year Student, 2nd Coll. Prize. A.H.S., A.H.P., Clin. Asst. Skin Dept.
- COOK, T. D. (1880). Glendon, Torquay. M.B., C.M. Glasg.
- COOKE, C. W. (1883). 107, Walm Lane, Willesden Green. M.D. Lond.
Merchant Taylors' Scholar.
w 1883-4. 1st Year Student, 1st Entrance Science Scholarship.
H.P., A.H.S., Clin. Asst. Throat and Ear Depts.
- COOKE, J. (1853). Tettenhall, Wolverhampton. M.B. Lond.; F.R.C.S.
1855. Comparative Anatomy, Prize.
- COOKE, J. B. (1874). The Elms, Parkhurst, I.W.
- COOKSON, H. (1881). Surg.-Maj., I.M.S. Bengal. (Retired). F.R.C.S.
- COOMBE, A. T. (1871). 81, Clarendon Road, Notting Hill.
- COOMBE, C. F. (1882). 459, Crookes Moor Road, Sheffield.
- COOPER, G. F. (1878). Lagunas, Iquique. South America. M.B., B.S. Lond.
H.S., A.H.S., A.H.P., R.A.
- COOPER, H. J. (1886). Belmont, Lyme Regis, Dorset. M.A., M.B., B.C. Cantab.
H.P., Clin. Asst. Ear and Skin Depts.
- COOPER, H. S. (1886). Brightlingsea, Essex.
s 1887. 2nd Year Student, 2nd Coll. Prize.
- COPELAND, W. H. L. (1885). 59, Warwick Road, Earl's Court. M.A., M.D., B.C. Cantab.
H.P.
- COPEMAN, A. H. (1890). Sunnyside, Littleport, Cambs. B.A. Cantab.
- COPEMAN, S. M. (1883). Local Govt. Board, Whitehall. M.A., M.D. Cantab.; M.R.C.P., D.P.H. Lecturer on Pub. Health, Westminster Hosp. Demonstrator of Physiology and Morbid Histology.
- CORBETT, T. (1857). Severn House, Droitwich, Worc.
- CORBIN, E. K. (1870). 9, Saumarez Street, St. Peter Port, Guernsey.
- CORBIN, M. A. B. (1832). 8, Saumarez Street, St. Peter Port, Guernsey. F.R.C.S.
1834. Cheselden Medal.
- CORNER, E. M. (1895). B.A., M.B., B.C. Cantab.
- CORNEY, B. G. (1868). Suva, Fiji.
- CORNWALL, J. W. (1892). Surg.-Lt. I.M.S. M.A., M.B., B.C. Cantab.
Clin. Asst. Throat Dept.
- CORY, I. R. (1878). Shere, Guildford, Surrey.
- CORY, R. (1867). 73, Lambeth Palace Rd. M.A., M.D. Cantab., F.R.C.P., Joint Lect. on For. Med. Physn. Vacc. Dept.
1870. Physical Society's 3rd Year's Prize. H.S., Asst. Obst. Phys.
- COULTER, W. (1881). 2/2, Harington Street, Calcutta, India. M.D., M.Ch.R.U.I.
- COUSINS, J. W. (1853). Riversdale, Kent Rd., Southsea. M.D. Lond.; F.R.C.S., J.P.
1855. Surgery, Prize;
Midwifery, Prize.
1856. Clinical Medicine, Prize;
Surgery and Surgical Anatomy, Cheselden Medal.
- COWBURN, A. D. (1889). 31, Barkston Gardens, Earl's Court. M.D. Brux.
- COWELL, A. R. (1887). 28, Downshire Hill, Hampstead. M.A., M.B., B.C. Cantab.
- COWEN, E. I. (1875). Cleveland Villa, Thornaby-on-Tees.
- COWEN, E. J. (1892). Los Angeles, California, M.B., B.S. Durh.
- COWEN, P. (1861). 47, Ingleby Road, Upper Holloway. M.D. Durh.; D.P.H. Camb.
1862. 1st Year Student, 2nd Coll. Prize.
1863. 2nd Year Student, 2nd Coll. Prize.
1864. 3rd Year Student, 2nd Coll. Prize.
- COWEN, T. P. (1884). 47, Ingleby Rd., Upper Holloway. M.D., B.S. Lond.
w 1884-5. 1st Year Student, Half 1st and 2nd Coll. Prizes.
s 1885. 1st Year Student, 2nd Coll. Prize.
w 1885-6. 2nd Year Student, 1st Coll. Prize.
s 1886. 2nd Year Student, 1st Coll. Prize.
w 1886-7. 3rd Year Student, 2nd Coll. Prize.
H.P., H.S., A.H.S., Clin. Asst. Ear Dept.
- COWEN, W. A. D. (1873). Surg.-Maj. Army.

- COWIE, A. M. (1890). Bank Buildings, Hong Kong, China. M.B., C.M. Aberd.
- COWIE, R. A. (1890). 38, Gwendoline Street, Tynewydd, Glam.
- COX, A. E. (1887). 36, Hoghton Street, Southport. M.B., C.M. Edin.
- COX, A. E. (1881). 58, High St., and Upton Rd., Watford, Herts.
- COX, J. L. C. (1879). St. Ann's Bay, Jamaica.
- COXWELL, C. F. (1879). Brighton, Melbourne, Australia. M.D. Cantab., M.R.C.P., D.P.H.
1880. 4th Year Student, the Mead Medal. H.P.
- CRANSTOUN, C. B. (1881). 15, Broad Street, Ludlow, Salop. M.B. Durh.
- CRANSTOUN, G. (1881). 3, Brand Lane, Ludlow, Salop. M.B. Durh.
- CRAWFORD, G. B. (1885). South Street, New Ross, Co. Wexford. M.D., M.S., R.U.I.
- CREIGHTON, C. 34, Gt. Ormond Street. M.A., M.D., C.M. Aberd.; M.A. Cantab.
Surg. Registr., 1873.
- CREIGHTON, E. (1878). Tankerville House, Greyhound Lane, Streatham Common.
- CRICK, A. (1885). Vale Lodge, Abbey Road, St. John's Wood.
- CRICK, S. A. (1874). Junior Army and Navy Club, St. James's. M.B., M.S. Durh.
w 1875-6. Prosecutor's Prize.
w 1876-7. 3rd Year Student, 3rd Coll. Prize. A.H.P., A.H.S.
- CRICK, W. T. (1877). Houghton House, Stoney Gate, Leicester.
- CRISP, E. H. (1883). The Lawns, Balham Hill. B.A. Cantab.
Clin. Asst. Skin, Throat, and Ear Depts.
- CRISP, T. (1874). M.B. Lond.
- CROFT, J. (1850). 6, Mansfield Street, Cavendish Sq. F.R.C.S., Consulting Surgeon St. Thomas's Hospital. Special Lecturer on Clinical Surgery, Surgeon, Lecturer on Practical Surgery, and Assistant Demonstrator of Anatomy.
- CROKER, E. U. (1891). Claremont House, Seaford.
- CROSBY, H. T. (1880). 19, Gordon Sq. M.A., M.B., B.C. Cantab.
- CROSBY, T. B. (1850). 19, Gordon Sq. M.D. St. And.; F.R.C.S.
1851. Physiology, Prize;
Descriptive Anatomy, Prize;
Medicine, Prize;
Surgery, Prize.
1852. Physiology, Prize;
Forensic Medicine, Prize;
Practical Chemistry, Prize;
Surgery and Surgical Anatomy, Bronze Cheselden Medal;
Comparative Anatomy, Prize.
H.S. and Demonstr. of Anat.
- CROSS, E. J. (1883). St. Neots, Hunts. D.P.H. Cantab.
- CROSS, G. (1887). Burgh, Lincolnsh.
- CROSS, J. (1888). 1, Finchley Road, Kennington Park.
- CROSSMAN, J. (1870). 331, Wands-
worth Road. M.D. Durh.
1871. Physical Society's 1st Year's Prize.
1872. Physical Society's 2nd Year's Prize.
1873. Physical Society's 3rd Year's Prize.
H.S.
- CROUCH, H. C. (1890). 44, Welbeck Street. Anæsthetist, St. Thomas's Hospital.
w 1890-1. 1st Year Student, 2nd Entrance Science Scholarship.
H.S., A.H.S.
- CROUCHER, H. The Limes, 320, Dart-
ford Road, Dartford, Kent (retired).
- CROUDACE, J. H. (1883). 23, Marston Road, Stafford.
- CROWDY, F. D. (1881). Belvedere House, Torquay. M.A., M.D. Oxon.
w 1884-5. 4th Year Student, the Mead Medal.
H.S., A.H.S., H.P.
- CROXFORD, W. C. (1883). Havelock House, Park Road, Peterborough.
- CUFF, A. W. (1891). Res. Med. Off. Gen. Infirm. Sheffield. B.A., M.B., B.C. Cantab., F.R.C.S.
H.S., A.H.S., Clin. Asst. Throat Dept.
- CULLINGWORTH, C. J. 14, Man-
chester Square. M.D., Hon. D.C.L. Durh.; F.R.C.P.; Obst. Phys. and Lect. on Midw. and Dis. of Women, St. Thomas's Hospital. Examiner in Midwifery, &c., Univ. Camb.
- DADACHANJI, E. R. (1880). Baroda, India.
- DALGADO, D. G. (1879). Savantvadi, India. M.D. Brux.
- DANIEL, A. W. (1895). B.A. Cantab.
- DANIEL, E. G. C. (1892). 28, Station Road, Epsom. B.A., M.B., B.C. Cantab.
H.P.

- DANIEL, R. N. (1886). 13, Nevern Square, South Kensington.
- DANVERS, H. (1882). Villa Mostaccini, Bordighera, Italy (Winter). Baths of Lucca (Summer).
- DARBYSHIRE, D. E. (1892). M.B., B.Ch. Vict.
- DARKER, G. F. (1887). 21, Palace Square, Upper Norwood.
- DARTER, G. B. S. (1885). Victoria West, Cape Colony. M.B., B.S. Durh.
- DAVIDSON, A. D. (1872). 9, Picton Place, St. Helen's Road, Swansea. M.A., M.D. Cantab.
Ophth. Asst.
- DAVIDSON, G. (1888). Gayndale Hospital, Queensland.
- DAVIES, A. O. (1886). Penrallt, Machynlleth, Montg.
- DAVIES, D. S. (1874). Public Health Offices, 40, Prince Street, Bristol, and 60, Oakfield Road, Clifton. (Not in private practice.) M.B., M.D. (State Med.) Lond.; D.P.H. Cantab.
1875-6. Physical Society's 1st Year's Prize. H.S., A.H.S., A.H.P.
- DAVIES, S. H. R. (1888). Ashleigh, Teignmouth, S. Devon.
- DAVIES, W. J. E. (1891). St. Luke's Infirmary, Cale Street, Chelsea.
- DAVIS, E. H. (1870). West Hartlepool. J.P.
R.A.
- DAVIS, G. W. (1880). Sunnyside, Main Road, Sidcup, Kent. M.D., B.S. Durh.
- DAVIS, H. E. (1882). 619, Green Lanes, Haringay.
- DAVIS, H. J. (1889). New University Club, M.A., M.B., B.C. Cantab.
H.S., A.H.S. Clin. Assist. Ear Dept.
- DAVIS, R. (1889). Darrickwood, Orpington, Kent.
- DAWNAY, A. H. P. (1892). 24, Marloes Road, Kensington.
Ophth. H.S. Clin. Assist. Skin Dept.
- DAWSON, W. J. H. (1888).
- DAY, E. J. (1871). Dorchester.
- DAY, W. H. (1843). Surrey Street, Norwich.
- DEANE, E. (1873). Downs, Taunton (retired).
- DE CAUX, H. L. (1881). The Eagles, Gregory Boulevard, Nottingham.
- DECK, J. F. (1859). Ashfield, Sydney, N.S. Wales. M.D. St. And.
1860. 1st Year Student, 1st Coll. Prize.
1861. 2nd Year Student, 1st Coll. Prize
Physical Society's Prize.
1862. 3rd Year Student, 1st Coll. Prize
Physical Society's Prize;
Cheselden Medal;
Treasurer's Gold Medal.
- DE GRUCHY, C. W. (1881). 30, High Street, Caerleon, Monmouthsh.
- DE JERSEY, W. B. (1886). Waterden Road, Guildford. B.A., M.B., B.C. Cantab.
A.H.P., Clin. Asst. Ear Dept.
- DE LOM, H. A. (1880). Surg.-Capt. Army.
- DENNE, T. V. de. (1864). Cradley Heath, Staffordsh.
- DE VILLIERS, J. H. (1890). 104, Cromwell Road.
- DEWES, F. J. (1880). Surg.-Capt. Madras Army.
- DE WET, P. C. (1882). Pretoria, Transvaal, S. Africa.
- DEWHURST, J. H. (1887). Chipping Campden, Glouc. M.A., M.B., B.C. Cantab.
H.S., A.H.S.
- DE WOLFSON, L. E. G. (1877). 26, St. John's Hill, Shrewsbury.
- DICKENS, C. H. (1888). 269, Stanhope St. M.B., B.S. Durham.
- DICKERSON, S. H. (1851). Brig.-Surg. Army (retired).
- DICKINSON, W. G. (1871). Elm Bank, West Hill, Putney Heath. D.P.H.
- DICKSON, T. H. (1885). Custom House, Lr. Thames Street, and 27, Scarsdale Villas, Kensington. M.A., M.B., B.C. Cantab.
A.H.P., Clin. Asst. Throat Dept.
- DILLON, R. W. (1888). 1, Galveston Road, East Putney.
- DIXON, H. L. (1888). Asst. Med. Off. St. Andrew's Hosp., Northampton. M.A., M.B., B.C., D.P.H. Cantab.
- DIXON, W. E. (1890). 28, Benson Rd., Forest Hill. M.B., B.S., B.Sc. Lond. D.P.H. Camb., Salters' Company Research Fellow.
w 1890-91. 1st Year Student, 1st Entrance Science Scholarship.
s 1891. 1st Year Student, 2nd Coll. Prize.
H.P., Clin. Asst. Electr. Dept.
- DOBSON, A. (1889). 115, Bath Street, Ilkeston, Derby.
- DOBSON, N. C. (1864). 27, Victoria Square, Clifton, Bristol. F.R.C.S., Emer. Prof. Surg. Bristol Univ. Coll., Cons. Surg. Bristol Gen. Hosp.
1865. 1st Year Student, 1st Coll. Prize.
1866. 2nd Year Student, 1st Coll. Prize.
1867. 3rd Year Student, 2nd Coll. Prize;
A Prize and Hon. Cert. for Proficiency in Surgery and Surgical Anatomy at the Cheselden Medal Examination;
Treasurer's Gold Medal.
H.S.
- DODD, G. H. (1878). Portswood Road, Southampton. B.A. Cantab.

DONKIN, H. B. (1868). 108, Harley Street, Cavendish Sq. M.A., M.D. Oxon. ; F.R.C.P. H.P.

DORMAN, M.R.P. (1888). 9, Norfolk Crescent, Hyde Park. M.A., M.B., B.C., D.P.H. Cantab. H.P., Clin. Asst. Throat Dept.

DOUBLEDAY, J. (1848). Melton Mowbray, Leicester (retired).

DOUDNEY, G. H. (1876). St. Lawrence, Wainfleet, Linc. M.B. Durh.

DOUGLAS, A. L. (1878). 163, Westbourne Terr., Hyde Park.

DOWDING, E. F. C. (1892).

DRAKE, C. H. (1857). Brixton Hill.
1858. 2nd Year Student, Treasurer's 1st Prize;
Clinical Medicine, 2nd Prize.
1859. Surgery and Surgical Anatomy, Cheselden Medal;
General Proficiency, Treasurer's Medal.
H.S.

DRAKE, T. (1857). Red House, Winchester.
1858. 2nd Year Student, Treasurer's 1st Prize.
1859. 2nd Year Student, President's Prize.
1860. 3rd Year, 1st Coll. Prize;
Surgery and Surgical Anatomy, Cheselden Medal;
General Proficiency, Treasurer's Medal.

DRAKE, W. E. (1888). Red House, Winchester. M.A., M.B., B.C. Cantab.

DRESSER, A. K. (1872).

DRINKWATER, T. W. (1871). Chemical Laboratory, 5, Teviot Place, Edinburgh. Lect. on Chem. Sch. of Med. Edin.; Exam. in Chem. and Pub. Health R.C.S. Edin.

DRUITT, A. B. (1880).

DUFF, J. (1885). 5, Abbey St., Abbey Sq., Chester. M.D., C.M. Glasg.; M.R.C.P. Clin. Asst. Throat Dept.

DUKES, C. (1864). Sunnyside, Rugby, Warwickshire. M.D., B.S. Lond., M.R.C.P., J.P.; Physician to Rugby School, and Senior Physician to Rugby Hospital.
H.S.

DUKES, T. A. (1885). 16, Wellesley Road, Croydon, Surrey. M.B., B.Sc. Lond. H.P.

DUMERGUE, H. W. (1884). 16, Clarges Street, Mayfair. M.A., M.D., B.C. Cantab.

DUNCAN, H. (1882). 11, Bolton Street, Piccadilly. B.A. Cantab., M.B. Lond.

w 1882-3. 1st Year Student, 1st Entrance Science Scholarship, 1st Coll. Prize.

w 1883-4. 2nd Year Student, Prosector's Prize.

A.H.S. Clin. Asst. Skin Dept.

DUNCAN, W. (1876). 6, Harley St., Cavendish Sq. M.R.C.P. Lond., M.D. Brux., F.R.C.S.; Obstetric Physician to, and Lecturer on Obstetric Medicine and Practical Midwifery at, Middlesex Hospital. Sen. Phys. Chelsea Hospital for Women. Examiner in Midwifery, Examining Board in England.

w 1876-7. 1st Year Student, The William Tite Scholarship.

s 1877. 1st Coll. Prize.

w 1877-8. 2nd Year Student, The Musgrove Scholarship;
2nd Year Physical Society's Prize.

s 1878. 1st Coll. Prize.

w 1878-9. 2nd Tenure Musgrove Scholarship; 1st Coll. Prize;
3rd Year Physical Society's Prize;
Grainger Testimonial Prize.

1880. 4th Year Student, The Cheselden Medal;
The Treasurer's Medal.

w 1881-2. The Solly Medal and Prize.

H.S., R.A.

DUNN, E. D. (1883). Brightwater, Nelson, New Zealand.

DUNN, J. E. (1878). 24, Stephenson Terrace, Preston, Lanc.

DUNSTAN, W. R., Queen Anne's Mansions. M.A., Oxon, F.R.S. Lecturer on Chemistry.

DURANT, R. J. A. (1876). Surg.-Capt. Army.

DURRANT, C. E. (1891). Avondale, Kingston Hill.
Clin. Asst. Ear Dept.

DURRANT, T. A. (1883). 42, High Street, Market Harborough, Leic.
Clin. Asst. Skin and Ear Depts.

- DURSTON, J. C. (1888). 67D, Upper Tulse Hill. Surg. R.N.
- DUTTON, A. S. (1884).
- DYBALL, B. (1890). General Infirmary, Leeds. M.B., B.S. Lond.; F.R.C.S.
w 1891-2. 1st Year Student, 1st College Prize.
w 1894-5. 4th Year Student, The Cheselden Medal.
1896. Beaney Scholarship.
H.S., A.H.S., Clin. Asst. Ear Dept.
- DYKE, T. J. (1836). Merthyr-Tydvil. F.R.C.S.
- EARLE, H. E. L. (1878). Surg. R.N. (retired).
- EASTON, T. (1883). Hanover House, Stranraer, Wigtownshire. M.A., M.D., C.M. Edin.
- ECCLES, C. H. (1883). Priestgate House, Nafferton, Yorks.
w 1884-5. 2nd Year Student, 1st Coll. Prize.
s 1885. 2nd Year Student, 1st Coll. Prize.
w 1885-6. 3rd Year Student, 1st Coll. Prize.
s 1886. 3rd Year Student, 1st Coll. Prize.
H.P.
- ECCLES, R. B. (1885). Great Driffield, Yorks.
- EDDOWES, J. H. (1842). Burleigh Fields, Loughborough, Leic. M.D. Glasg.
1843. Comparative Anatomy, Prize.
1844. Clinical Medical Reports, Silver Medal.
1845. Clinical Medicine, Prize.
- EDDOWES, W. D. (1844). Stamford, Linc. Cons. Surg. Stamford Infirm.
1845. Descriptive and Surgical Anatomy, Prize.
- EDDOWES, W. D., Jun. (1877). 20, St. George's Square, Stamford, Lincs.
- EDGE, F. 54, Darlington Street, Wolverhampton. M.D., B.S., B.Sc. Lond.; F.R.C.S., M.R.C.P.
- EDMONDS, C. G. (1862). Manor House, Manor Park, Streatham.
- EDMUNDS, W. (1871). 75, Lambeth Palace Road. M.A., M.B., M.C. Cantab.; F.R.C.S. Res. Med. Off. St. Thos. Home.
H.P., R.A., H.S.
- EDWARDS, F. W. (1887). Camp Field, Overhill Road, Forest Hill.
- EDWARDS, V. (1842). The Villa, Shotisham, Woodbridge, Suffolk (retired).
- EDYE, J. S. (1880). Surg.-Capt. Army.
- ELLIOTT, A. E. (1892). B.A. Cantab.
- ELLIOTT, J. W. (1854). 5, Manor Road, Forest Hill (retired).
Late Surg. Dentist.
- ELLIS, C. I. (1896). 33, Stormont Road, Clapham Common. M.B. C.M. Aberd.
- ELLIS, H. H. (1880). Carbis Water, Lelant, Cornwall.
- ELLIS, J. (1854). Cobourg St., Fratton, Portsmouth, and Anaheim, Los Angeles Co., California. M.D. Brux.; M.R.C.P.I.
H.S.
- ELLIS, R. K. (1884). Lowdham, Notts. M.A., M.B., B.Ch. Oxon.
Jun. and Sen. Obst. H.P.
- ELLIS, W. C. (1884). Tollerton, Easingwold, Yorks.
- ELWIN, C. J. (1853). 6, City Road. 1855. Practical Midwifery, Prize.
- EMBLETON, D. (1833). 19, Claremont Place, Newcastle-on-Tyne. (retired.)
M.D. Durh., M.D. Pisa, F.R.C.P.
Cons. Phys. Newc. Ry. Infirm.
- EMIN, M. (1891). M.B., C.M. Edin.
- EMSON, A. (1869). Dorchester.
- ENGLAND, G. F. A. (1883). 12, Southgate Street, Winchester. B.A., M.D., B.C. Cantab.
- ENGLAND, H. (1888). B.A. Cantab.
- ETHERIDGE, C. (1860). Seasalter, Whitstable, Kent.
- EVANS, J. T. (1825). M.D. St. And.
- EVE, R. W. (1851). 101, Lewisham High Road. M.B. Aberd.
- EVELYN, W. A. (1882). 24, Micklegate, York. M.A., M.D. Cantab.
- FAIRBAIRN, J. S. (1893). St. Thomas's Hospital. B.A., M.B., B.Ch. Oxon.
Obst. Tutor and Registrar.
H.P. Obst. H.P.
- FAIRBANK, J. (1864). 18, George St., Hanover Square.
1866. 2nd Year Student, Prosector's Prize.
- FANNING, W. J. (1892).
- FARAKER, W. C. (1860). Glenview, Peel, Isle of Man.
- FARRANT, S. (1857). North Street House, Taunton.
- FAULDS, H. (1886). 141, Duke St., Fenton, Stoke-on-Trent.
- FAWSSETT, F. (1882). 83, High Street, Lewes, Sussex. M.B., B.S. Lond.
w 1883-4. 1st Year Student, 2nd Entrance Science Scholarship. The William Tite Scholarship.
s 1884. 1st Year Student, 1st Coll. Prize.
w 1884-5. 2nd Year Student, The Musgrove Scholarship.
w 1885-6. 3rd Year Student, 2nd tenure of Musgrove Scholarship, with 3rd Coll. Prize.
w 1886-7. 4th Year Student, The Cheselden Medal, Treasurer's Gold Medal.
R.A., H.S., A.H.S.

- FAWSSETT, R. (1887). Surg.-Lt. Army.
- FELL, W. (1877). Wellington, New Zealand. M.D. Oxon.
H.P., A.H.P., A.H.S., R.A.
- FENTON, H. A. H. (1875). I, Cumberland St., Pimlico. M.D. Brux.
w 1875-6. 1st Entrance Science Scholarship.
s 1876. 1st Year Student, 1st Coll. Prize.
- FENWICK, P. C. (1889). Christchurch, New Zealand. M.B. Lond.
Sen. and Jun. Obst. H.P.
- FERNANDES, A. S. Chickmaglore, India. M.R.C.P. Edin.
- FERNIE, W. T. (1850). Kimbolton, The Lees, Folkestone. M.D. Durham. R.A.
- FIELDER, S. (1886). Gosford, New South Wales.
- FIELDING, J. (1868). Bethel Street, Norwich, M.D. Vict. Univ. Canada. R.A.
- FINCHAM, W. S. (1884). 53, Kew Bridge Road, Brentford, Middlx.
- FINUCANE, M. I. (1881). Fiji.
- FISH, C. E. (1889). B.A., M.B. B.C. Cantab.
- FISHER, J. (1888). D.S.O., Surg.-Capt. I.M.S. Bengal. B.A., M.B., B.C. Cantab.
Ophth. H.S.
- FISHER, J. H. (1886). 34, Queen Anne Street. M.B., B.S. Lond., F.R.C.S. Asst. Ophthalmic Surgeon. Demonstr. of Anat.
w 1887-8. 1st Year Student, The William Tite Scholarship.
s 1888. 1st Year Student, 1st Coll. Prize
w 1888-9. 2nd Year Student, The Musgrove Scholarship.
w 1889-90. 3rd Year Student, 2nd tenure of Musgrove Scholarship, with 1st Coll. Prize.
s 1890. 3rd Year Student, 1st Coll. Prize.
w 1890-1, 4th Year Student, Treasurer's Gold Medal.
Sen. and Jun. Obst. H.P., H.S., A.H.S., Clin. Asst. Ear Dept., Ophth. H.S.
- FISHER, T. (1872). Mulberry House, Gt. Eccleston, Garstang, Lanc.
s 1873. 2nd Year Student, 2nd Coll. Prize.
w 1874. 2nd Year Student, 3rd Coll. Prize.
w 1875. 3rd Year Student, Surgery and Surgical Anatomy, Prize.
- FISHER, T. E. H. (1885). 272, Wightman Road, Hornsey.
- FITZGERALD, G. C. (1882). Med. Superint. Kent Co. Asyl., Chartham Down, Canterbury. M.D., B.C. Cantab.
- FITZGERALD, W. A. (1879). Monte Carlo, Monaco. A.B., M.D. Dublin.; F.R.C.S.I.
- FITZ-HENRY, G. W. (1880). Amberley, North Canterbury, New Zealand.
- FLEGG, F. A. M. (1886). George Lane, Woodford, Essex.
- FLETCHER, G. (1869). 60, Southwood Lane, Highgate. B.A., M.D. Cantab.
- FLETCHER, T. B. E. (1836). 8, Clarendon Cresc., Leamington (retired). B.L. Paris; M.D., F.R.C.P., J.P., Cons. Phys. Birm. Gen. Hosp.
- FLETCHER, W. B. (1859). Fleet Surg. R.N. (retired).
- FLOYER, F. A. (1880). Mortimer, Berks. B.A., M.B. Cantab.
Demonstr. of Pract. Surg.
- FOLEY, C. N. (1878). Fort Darwin, Falkland Islands East.
- FONMARTIN, H. de (1875). Vue, Loire Inférieure, France. M.D. Paris.
- FOOKS, W. P. (1888). Med. Superint. Brentford Union Infirmary, Isleworth. M.A., M.B., B.C. Cantab. H.P.
- FOOTNER, E. (1855). Brig. Surg. Army (retired). M.D., C.M. Aberd.
- FORD, A. V. (1872). South View Lodge, Kent Rd., Southsea.
- FORD, T. A. V. (1880). Haileybury College.
- FORDE, T. A. M. (1885). 21, Clarence Parade, Southsea.
H.S., A.H.S., Clin. Asst. Skin and Throat Depts.
- FORRESTER, W. (1894). Sharpur, Khushab, Punjaub, India.
- FORSTER, H. B. (1878). Emerald Hill, Melbourne, Victoria, Australia.
- FORT, T. (1873). Falcon House, King Street, Oldham.
- FORWARD, F. E. (1884). Antigua, W. Indies. F.R.C.S.
H.P., Ophth. H.S.
- FOURACRE, R. P. (1859). 58, Tollington Park, Holloway.
- FOWLER, F. (1883). Minchinhampton, Stroud, Glouc.

- FOWLER, REV. J. T. (1853). Bp Hatfield's Hall, Durham, and Winterton, Doncaster (retired). M.A., D.C.L. Durh. H.S.
- FOXWELL, A. (1877). 22, Newhall Street, Birmingham, and Northfield Grange, near Birmingham. B.A. Lond.; M.A., M.D. Cantab.; F.R.C.P. Physician Queen's Hosp., Birmingham. Examiner in Medicine Univ. Camb. H.P.
- FRANCIS, G. P. (1874). The Bulwark, Brecon.
- FRANKLIN, G. C. (1866). 39, London Road, Leicester. F.R.C.S. Hon. Surg. Leic. Infy. H.S., R.A.
- FRASER, D. H. (1889). 72, Bolton Road, Pendleton, Manchester.
- FRASER, D. (1877) Peterborough, Ontario, Canada.
- FRASER, H. (1884). Bank House, Slough.
- FRAZER, W. D. (1890). 21, Central Road, Fordsburg, Johannesburg. H.S., A.H.S., Clin. Asst. Ear and Electr. Depts.
- FREDERICK, H. J. (1887). Kornthal, Sidcup, Kent. Clin. Asst. Throat and Ear Depts.
- FREEMAN, A. J. (1861). 14, Manchester Square, and San Remo, Italy. M.D. Aberd. Asst. Res. Med. Off.
- FREEMAN, D. (1857). 29, Dorset Square. 1859. Clinical Medicine, Prize.
- FREEMAN, E. C. (1879). Surg.-Capt. Army.
- FREEMAN, W. H. (1840). 21, St. George's Square, Pimlico (retired).
- FROHWEIN, O. F. (1880). 47, Lichfield Street, Burton-on-Trent.
- FULLER, A. L. (1888). 7, Oxford Row, Bath.
- FULLERTON, F. W. (1887). 79, Prospect Street, Hull. M.D., B.S. Durh.
- FURNIVAL, F. H. (1878). Auburn, New South Wales. w 1878-9. 1st Year Student; The Wm. Tite Scholarship.
- GABBETT, P. C. (1887). Surg.-Capt. I.M.S., Madras.
- GARDENER, W. F. (1884). Darley House, Venner Road, Sydenham.
- GARNER, J. (1888). Clonmel, co. Tipperary.
- GARTON, W. (1869). Inglewood, Aughton, Ormskirk. M.D., C.M. Edin.; F.R.C.S. 1870. 2nd Year Student, 2nd Coll. Prize; Physical Society's 2nd Year's Prize. 1871. Physical Society's 3rd Year's Prize. H.P., H.S., R.A.
- GAUSSEN, D. P. (1884). The Hill, Dunmurry, co. Antrim. M.D., R.U.I.
- GEDGE, A. S. (1886). Asst. Med. Off. Co. Asyl., Maidstone, Kent.
- GENGE, G. G. (1890). 1, Poplar Walk, Croydon. M.D., B.S. Lond., D.P.H. Camb. w 1890-1. 1st Year Student, 1st Coll. Prize. s 1891. 1st Year Student, 1st Coll. Prize. w 1891-2. 2nd Year Student, The Peacock Scholarship. w 1892-3. 3rd Year Student, 2nd Tenure of Peacock Scholarship, with 1st Coll. Prize. w 1893-4. 4th Year Student. The Mead Medal; The Treasurer's Gold Medal. H.P., Obst. H.P., Clin. Assist. Ear and Skin Departs.
- GEORGE, A. W. (1888). 1, Burton Road, Brondesbury. M.B., C.M. Edin.
- GEORGE, C. F. (1854). Kirton-in-Lindsey, Linc. 1856. 2nd Year Student, Dr. Root's Prize. 1857. Surgery and Surgical Anatomy. Cheselden Medal. H.S.
- GEORGE, H. (1882). Innisfail, Alberta, Canada. M.D. St. And.
- GERVIS, A. F. (1884). 1, Queen's Crescent, Haverstock Hill.
- GERVIS, F. H. (1860). 1, Fellows Road, Haverstock Hill. 1861. 1st Matriculation Scholarship—Coll. Prize, 2nd College Prize. 1862. 2nd Year Student, 1st Coll. Prize. H.S., R.A.
- GERVIS, F. H. (1891). 1, Fellows Road. w 1891-2. 1st Year Student, 2nd Entrance Science Scholarship. H.S., A.H.S.
- GERVIS, H. (1855). 40, Harley St., and The Towers, Hillingdon, Uxbridge. M.D. Lond., F.R.C.P. Consulting Obstetric Physician to St. Thomas's Hospital, and to the Royal Maternity Charity. 1856. 1st Year Student, Trea. 1st Prize; Matriculation Examination, Physics, &c., Prize. 1857. 2nd Year Student, President's Prize; Physical Society's Essay, Prize. 1858. Clinical Assistant (Medicine), 2nd Prize; Physical Society's Essay, Prize; General Proficiency, Trea. Medal. Obstetric Physician. Lecturer on Midwifery and Diseases of Women and Children.

- GERVIS, H. (1884). Windhill Place, Bishops Stortford, Herts. M.A., M.B., B.C. Cantab.
H.S., A.H.S., R.A.
- GIBBON, A. H. (1893). Angel Hill, Bury St. Edmunds.
Clin. Asst. Elect. Dept.
- GIBBS, A. N. G. (1879). 52, Whiteladies Road, Clifton, Bristol.
- GIBSON, W. A. (1888). Stockfield, Leigham Vale, Streatham.
- GILBERT, H. P. (1873). Aston Clinton, Tring.
- GILBERT, L. (1892).
w 1892-3. 1st Year Student, Half 2nd Coll. Prize.
A.H.S., H.S.
- GILBERTSON, W. (1889). 63, Evelyn Gardens. B.A. Cantab.
- GILDER, S. E. A. (1875). 16, Salisbury Gardens, Tunbridge Wells.
- GILES, F.W. (1873). Hotel Continental, Cannes, France. M.B. Durh.
- GILL, J. (1872). 24, Pembroke Road, Clifton, Bristol. M.D. Brux.
- GILLAM, J. B. (1888). Holt, Norfolk. B.A., M.B., B.C. Cantab.
- GILLARD, C. R. (1872). 879, Dorchester Street, Montreal, Canada. M.D., C.M. Montreal
- GILMOUR, J. H. (1870). Hurst Lodge, Hurstbourne - Tarrant, Andover, Hants.
- GIMLETTE, G. H. D. (1873). Surg.-Major Bengal Army. M.D., M.Ch. R.U.I.
w 1876-7. Physical Society's 3rd Year's Prize.
H.P., R.A., H.S., A.H.S.
- GIMLETTE, J. D. (1885). Kudla Lipis, Ulu Pahang, Malay Peninsula.
- GIMLETTE, T. D. (1874). Fleet Surg. R.N.
- GIRDLESTONE, H. E. (1886). Ard-voulan, Poole Road, Bournemouth.
- GLADSTONE, A. E. (1893).
- GODDARD, B. (1885). 27, Pentonville Road, and 106, Highbury New Park.
- GODDARD, E. (1859). North Lynn, 106, Highbury New Park. M.D. Durh.
1860. Matriculation Examination, Classics, &c., Prize.
- GODFREY, A. E. (1881). Lansdowne, Woodside Park, North Finchley. M.B. Lond.
s 1883. 2nd Year Student, 2nd Coll. Prize.
w 1883-4. 3rd Year Student, 2nd Coll. Prize.
H P., A.H.P., R.A. Clin. Asst Ear Dept.
- GODFREY, H. J. C. (1878). 7, Manor Street, Bridlington Quay, Yorks.
- GODFREY, T. H. (1882). Lichfield Grove, Finchley. M.B. Durh.; D.P.H. Cantab.
- GOLDSMITH, J. (1854). Lee-on-the-Solent, Gosport, Hants. M.D. St. And. (Retired).
- GOOD, J.W. (1877). Winnipeg, Canada.
- GODDY, E. S. (1881). Abbeydale, Trinity Square, Llandudno. F.R.C.S.
w 1882-3. 2nd Year Student, 3rd Coll. Prize.
s 1883. 2nd Year Student, 1st Coll. Prize.
H.S., A.H.S., A.H.P.
- GOODE, H. N. (1891). 3, Vicarage Gardens, Kensington.
H.P.
- GOODHUE, F. W. J. (1888). Langton, Upton Road, Watford. B.A. Cantab.
- GORDON, B. (1881). 11, Manor Park Parade, Lee.
- GORNALL, J. G. (1888). Holly Bank, Latchford, Warrington, M.A., M.B., B.C. Cantab.
- GORST, H. (1878). Huyton, Liverpool.
- GOULSTON, A. (1877). 2, Homefield Place, Heavitree, Exeter. M.A. Cantab.
- GOVER, H. J. (1875). Littlebury, Saffron Walden, Essex. M.A., M.B. Cantab.
- GOVER, L. D. (1884). 30, Bernard St., Russell Square.
Clin. Asst Ear Dept.
- GRABHAM, G. W. (1854). Mathyns, Witham, Essex. M.D. Lond.; M.R.C.P.
1855. Matriculation Scholarship.
- GRABHAM, M. (1888). Kingston, Jamaica, W. Indies. M.B., B.C. Cantab.
- GRABHAM, M. C. (1858). Madeira. M.D. Aberd.; F.R.C.P. Lond.
H.S.
- GRAHAM, V. (1889). Calmswood House, Dewsbury.
- GRANT, A. J. (1888). 5, Dryden Mansions, West Kensington. M.D. Brux.
Clin. Assist. Throat Dept.
- GRANT, J. H. S. 25, Baldry Gardens, Streatham.

- GRANT, J. W. G. (1884).
- GRANT-WILSON, C. W. (1887). 56, High Street, Bromley. Obst. H.P.
- GRAY, C. (1855). Surg-Maj. Army (retired).
- GRAYDON, A. (1886). 124, Cornwall Road, Notting Hill.
- GREAVES, C. A. (1860). 84, Friar Gate, Derby. M.B., LL.B. Lond.; A.A. Oxon.
 1861. 1st Year Student, Treasurer's Prize.
 1862. 2nd Year Student, 2nd Coll. Prize; Physical Society's Prize.
 1863. 3rd Year Student, 1st Coll. Prize; Physical Society's Prize; Cheselden Medal.
 H.S., R.A.
- GREAVES, F. L. A. (1892). A.H.S.
- GREAVES, H. (1888). Hankelow, Audlem, Chesh. B.A., M.B., B.C. Cantab.
- GREEN, A. (1886). 1, Walker Terr., Gateshead-on-Tyne. M.B. Durh.
- GREEN, C. D. (1879). Addison House, Upper Edmonton. M.D., B.S. Lond.; F.R.C.S. Eng.
 w 1879-80. 1st Year Student, The Wm. Tite Scholarship.
 s 1880. 3rd Coll. Prize.
 w 1880-1. 1st Coll. Prize.
 s 1882. 1st Coll. Prize.
 H.S., A.H.S., H.P., A.H.P., R.A.
- GREEN, E. C. (1877). 27, Friar Gate, Derby.
- GREENE, F. W. (1852). Isipingo, Durban, Natal.
- GREENFIELD, W. S. 7, Heriot Row, Edinburgh. M.D., F.R.C.P. Lond.; F.R.C.P. Edin.; F.R.S.E.; Prof. of Path. and Clin. Med. Univ. Edin. Assist. Phys., Med. Registr., and Lect. on Path. Anat.
- GREENWOOD, J. W. (1867). Peel House, Hanley, Staffs. M.D. St. And.
- GREG, A. H. (1895). B.A., M.B., B.C. Cantab. A.H.S.
- GREGORY, S. (1880). Hadfield House, Birchanger Road, South Norwood.
- GRESSWELL, G. (1889). 395, Cleethorpe Rd., Gt. Grimsby, Linc. M.A. Oxon.; M.A. Cape of Good Hope.
- GRIEVE, W. D. (1885). 47, Buccleuch St., Dumfries. M.B., C.M. Edin.
- GRIFFITH, A. L. (1856). 606, Harrow Road. M.D. St. And.
- GRIFFITH, W. S. (1886). Kimberley, Cape Colony. M.B., B.C. Cantab.; F.R.C.S.
 H.S., Clin. Asst. Skin Dept.
- GRIFFITHS, F. A. Ingleton, Lancaster, Yorks.
- GRIMBLY, R. (retired).
- GRIMBLY, R. H. (1872). Newton Abbott, S. Devon.
- GROOME, W. W. (1876). Suffolk House, Maple Road, Surbiton. B.A., M.D. Cantab.
 H.P., A.H.P.
- GROSE, S. (1856). Valetta, Thurlow Road, Torquay. M.D. St. And.; F.R.C.S.
- GRÜNBAUM, A. S. F. (1887). Univ. Coll., Liverpool. M.A., M.D., B.C., Cantab.; M.R.C.P.
 1893. Grainger Testimonial Prize.
 H.P., Clin. Assist. Skin Dept.
- GURNEY, H. (1880). Stour House, Dovercourt, Essex.
- GURNEY, R. A. F. (1848). Thame, Oxon.
 1851. Practical Midwifery, Prize.
- GUTHRIE, T. C. (1895). 9, Church Road, Tunbridge Wells. M.B., M.S. Edin.
- GWYNN, R. H. (1872). 19, Pitfield Street, Hoxton.
- HACON, E. D. (1836). 269, Mare St., Hackney. F.R.C.S. (retired).
- HAGUE, J. T. (1874). 320, Brixton Road.
- HAGUE, S. (1862). 325, Southampton Street, Camberwell. LL.B. Lond.; M.D. St. And.
 1863. 1st Year Student, 2nd Coll. Prize. Medical Registrar.
- HAIG, F. M. (1882). 4, Lansdowne Place, Coventry. M.A., M.D., B.C. Cantab.
 H.P.
- HAIG-BROWN, C. W. (1877). Dean Lodge, Godalming, Surrey. M.D., C.M. Aberd. Med. Off. Charterhouse Sch.
 s 1878. 1st Year Student, 2nd Coll. Prize.
 w 1878-9. 2nd Year Student, 2nd Coll. Prize.
 w 1880-1. The Cheselden Medal.
 H.P., A.H.P., H.S., A.H.S.
- HAINES, A. (1886). St. Just, Tenbury, Worc.
- HAINES, E. (1890). Raughmere, Lavant, Chichester. Surg. R.N.
- HAINWORTH, E. M. (1888). 54, Prince's Avenue, Hull. M.D., B.S., B.Sc. Lond., F.R.C.S. Hon. Assist. Surg. Royal Infirmary.
 w 1888-9. 1st Year Student, 1st Entrance Science Scholarship.
 s 1889. 1st Year Student, 2nd Coll. Prize.
 w 1890-1. 3rd Year Student, 1st Coll. Prize.
 s 1891. 3rd Year Student, 1st Coll. Prize.
 H.S., A.H.S., H.P.

- HAIRSINE, H. (1872). Roose House, Upp. Tooting.
- HAKIM, H. M. (1880). Surg.-Maj. I.M.S., Madras.
- HALL, J. B. (1892). 6, Marlborough Road, Bradford. M.A., M.B., B.C. Cantab.; Res. Casualty Off. Gen. Infirm. Leeds.
- HALL, J. L. (1873). Surg.-Maj. Army.
- HALL, J. S. (1891). 34, De Vere Gdns. H.S., A.H.S. Clin. Asst. Skin Dept.
- HALL, R. D. G. (1873). The Lilacs, Arundel Road, Littlehampton, Sussex.
- HALL, R. H. (1890). De Grey Lodge, Woodhouse Lane, Leeds. M.A., M.B., B.C. Cantab.
- HALL, S. H. (1894). 3, Crescent, Carlisle. M.B., C.M. Edin.
- HALLAM, S. R. (1886). 15, Huntingdon Street, Barnsbury.
- HALLILAY, R. P. (1887). Moorland Lodge, Leeds.
- HALLIWELL, T. O. (1889). Blagdon, Bristol. Clin. Asst. Throat Dept.
- HAMERTON, G. A. (1869). 3, Southampton St., Covent Gdn. M.D. Brux.; F.R.C.S. Eng. D.P.H.
- HAMMOND, J. H. (1847). 11, Winckley Square, Preston, Lanc. M.D. Aberd.; M.R.C.P., J.P. 1850. Medical Cases, President's Prize.
- HANBURY, W. R. (1889). County Asylum, Dorchester.
- HANLY, E. (1886). 1, Palace Court, Kensington Gardens. M.D., M.Ch. R.U.I.
- HANNAH, F. R. (1882). 66, Jackson Road, Holloway.
- HANSON, J. (1877). Adelaide, South Australia.
- HANWELL, G. L. (1888). 1, Blakesley Avenue, Ealing. Clin. Asst. Throat Dept.
- HARCOURT, G. R. (1888). Ass't. Med. Off. Lambeth Infirmary. Clin. Asst. Skin Dept.
- HARCOURT, J. C. (1891). Woodford Green. w 1891-2. 1st Year Student, The Wm. Tite Scholarship. s 1892. 1st Year Student, 2nd College Prize. s 1893. 2nd Year Student, 1st College Prize. s 1894. 3rd Year Student, 1st College Prize.
- HARDING, H. W. (1889). London County Asylum, Hanwell. H.S., A.H.S.
- HARDING, J. A. (1857). Osman House, 118, Cromwell Rd., Bristol (retired). 1859. Clinical Medicine, 2nd Prize. 1860. Clinical Assistant (Medicine), 1st Prize.
- HARDWICK, H. G. C. (1889). B.A. Cantab.
- HARDYMAN, C. E. (1866). Hill House, Bramerton, Norwich (retired). M.D. Durh.; F.R.C.S. Edin. H.S.
- HARE, E. H. (1872). Lightcliffe House, Hornsey. M.A. Oxon.; F.R.C.S. Eng. A.H.P.
- HARFORD-BATTERSBY, C. F. (1887). 14, Earlham Grove, Forest Gate. M.A., M.D., B.C. Cantab.
- HARLEY, J. 9, Stratford Place. M.D., F.R.C.P. Lond.; Cons. Phys. St. Thos. Hosp.; Cons. Phys. Lond. Fev. Hosp.
- HARMAN, L. (1889). Shalmsford, Brixton Hill. M.B. Durh.
- HARPER, J. (1889). 84, Barcome Avenue, Streatham Hill.
- HARPER, J. R. (1886). 3, Union Terrace, Barnstaple, Devon. H.S., A.H.S., R.A., S.O.C.
- HARPER, R. (1842). 18, Park Road, West Dulwich (retired). J.P. 1845. Physical Society's Essay, Prize Dresser's Clinical Surgery, Prize.
- HARPER, R. R. (1872). Holbeach, Linc.
- HARPER, W. J. (1887). Bloomfield, Braunton, N. Devon.
- HARRIS, F. A. (1874). Surg. Maj. Army.
- HARRIS, J. E. (1887). 46, Marsham Street, Westminster. B.A., D.Sc. Lond. w 1887-8. 1st Year Student, 1st Entrance Science Scholarship.
- HARRIS, J. B. (1864). Elsworthy, Upper Walmer. M.D. Durh.
- HARRIS, W. (1865). Res. Med. Supert. Norwich City Lunat. Asyl., Hellesdon, Norwich. F.R.C.S., M.R.C.P. Edin.
- HARRIS, W. J. (1881). 34, Wellington Square, Hastings.
- HARRIS-BICKFORD, A. (1855). Veor Villa, Camborne, Cornwall. M.D. St. And.
- HARRISON, A. (1878). Hermosa Road, Teignmouth, Devon.
- HARRISON, H. M. (1889). B.A. Cantab.

- HARRISSON, A. E. (1895). B.A., M.B., B.C. Cantab.
- HARTLEY, H. (1878). Stone, Staffords.
- HARVEY, E. (1877). Hamilton, Bermuda, W. Indies.
- HARVEY, S. F. (1875). 117A, Queen's Gate, South Kensington.
- HARVEY, T. (1863). 6, Montague Place, Poplar.
- HASLAM, H. C. (1893). 15, Lindfield Gardens, Hampstead. B.A., M.B., B.C. Cantab. H.P.
- HASLAM, J. N. (1833). Niel Lodge, Dagnall Pk., Selhurst.
- HASLAM, W. F. (1874). 54, Newhall St. Birmingham, and 24, York Road, Edgbaston. F.R.C.S., Demonstr. of Anatomy Mason Coll. Birmingham, Surgeon Birmingham General Hospital. Examiner in Anatomy for Fellowship R.C.S.
s 1876. 2nd Year Student, 1st Coll. Prize.
w 1877-8. The Cheselden Medal.
Demonstrator of Anatomy, H.P., A.H.P., H.S., A.H.S., R.A.
- HATCHETT, F. W. (1879). 6, Upper Cheyne Row, Chelsea.
- HATHAWAY, C. (1836). 11, Edward Road, St. Leonards-on-Sea. M.D. Aberd.
- HATHERELL, R. R. (1884). Hatch Beauchamp, Somers. M.A. Cantab.
- HATTON, G. S. (1875). Hanover House, Newcastle - under - Lyme. M. D., M. S. Durh.; F. R. C. S. Edin.
w 1876-7. 2nd Year Student, Prosector's Prize.
H.P., A.H.P.
- HAVILAND, A. Douglas, Isle of Man.
Late Lect. on Geography of Disease.
- HAWARD, H. H. (1890). Castleton, Northwich, Cheshire. B.A., M.B., B.C. Cantab.
Clin. Asst. Skin Dept.
- HAWKINS, H. P. (1882). 56, Portland Place. M.A., M.D. Oxon., F.R.C.P., Phys. to and Lecturer on Pathology at St. Thos Hosp. Dean of Med. School.
w 1882-3. 1st Year Student, The William Tite Scholarship.
w 1883-4. 2nd Year Student, The Peacock Scholarship.
w 1884-5. 3rd Year Student, 2nd tenure of Peacock Scholarship and 1st Coll. Prize.
Res. Asst. Phys., H.P., A.H.P., Demonstr. of Pract. Med. and Morbid Histology. Travelling Fellow, Oxford, 1886.
- HAWKINS, W. (1870). The Vicarage, Abbotsbury, Dorchester.
- HAYASHI, K. (1892). Tokyo, Japan.
- HAYDON, T. H. (1888). Marlborough. B.A., M.B., B.C. Cantab.
H.S., A.H.S., Obst. H.P. and Demonstr. of Pract. Surg.
- HAYFORD, E. J. (1885). Cape Coast Castle, Gold Coast.
- HAYMES, H. E. (1891).
- HAYWARD, J. (1857).
- HEATHER, B. G. (1886). Surg. R.N.
- HEAVEN, J. C. (1879). 17, Whiteladies Road, Clifton, Bristol. D.P.H., Lect. on Hygiene S. Kensington, and Demonstr. of Hygiene Univ. Coll. Bristol.
- HEELIS, R. (1876). Church Street, Lenton, Nottingham. M.D. Durh.
s 1877. 1st Year Student, 2nd Coll. Prize.
s 1878. 2nd Year Student, 2nd Coll. Prize.
A.H.P.
- HEFFERNAN, H. H. (1883). Grove House, Bexhill-on-Sea.
w 1883-4. 1st Year Student, 2nd Coll. Prize.
- HEFFERNAN, W. H. (1881). Alma Villa, Victoria Road North, Southsea.
- HEIN, G. G. B. (1884). Peterson Road, Wakefield.
- HELSHAM, H. P. (1882). Beccles, Suffolk.
- HELSHAM, W. M. (1882). Richmond, New South Wales.
- HEMINGWAY, J. (1885). 16, Merton Road, Wimbledon.
- HENDERSON, W. D. (1884). Regent Street, Kingswood, Bristol.
- HENRY, R. (1885). Surg. P. & O.
- HENSLOWE, F. W. D. (1871). Elm Tree Villa, Victoria St., Dunstable, Beds.
- HERBERT, W. (1890). 6, Lancaster Place, Hill Rise, Richmond.
- HERSCHELL, G. (1874). 27, Queen Anne Street. M.D. Lond.
- HEWAN, J. (1880). Cinnamara P.O., Jorhât, Upp. Assam, India.
- HEWETT, J. W. (1888). Medical Missionary, China Inland Mission, Pingyang, Shansee.
A.H.S.
- HEWITT, H. E. (1893). 80, Heathfield Road, Croydon.
w 1893-4. 1st Year Student, 2nd Entrance Scholarship, Tite Scholarship.
s 1894. 1st Year Student, 1st College Prize.
w 1894-5. 2nd Year Student, Musgrove Scholarship.
w 1895-6. 3rd Year Student, 2nd tenure of Musgrove Scholarship and 1st College Prize.
s 1896. 3rd Year Student, 1st College Prize.
w 1897-8. 5th Year Student, The Treasurer's Gold Medal.
H.P.

- HEYGATE, F. N. (1874). The Elms, Wisborough Green, Billingshurst.
- HEYGATE, W. N. (1861). 12, Bennett Street, Bath. R.A.
- HEYWOOD, C. C. (1887). Irlam's-o'-th'-Height, nr. Manchester. M.A., M.B., B.C. Cantab.
s 1888. 3rd Year Student, 2nd Coll. Prize Clin. Asst. Throat Dept.
- HICHENS, P. S. (1892). Brompton Hospital. M.A., M.B., B. Ch. Oxon.
w 1893-4. 3rd Year Student, 1st College Prize.
H.P. Ophth. H.S.
- HICKS, Rt. Rev. J. W. (1858). Bloemfontein, Orange Free State. M.D., F.R.C.P.
1859. 1st Year Student, Treasurer's 1st Prize.
1860. 2nd Year Student, 1st Coll. Prize; Physical Society's Prize.
1861. 3rd Year Student, 1st Coll. Prize; Physical Society's Prize.
Cheselden Medal;
Treasurer's Gold Medal.
- HICKS, T. W. (1887). Park House, East Finchley. M.B. Lond.
H.P., Obst. H.P., Clin. Asst. Throat Dept.
- HIGHTON, T. (1869). Green Hill House, Normanton Road, Derby. H.P.
- HILDYARD, N. (1879). 74, Marine Parade, Worthing.
- HILEY, R. F. (1884). Pilley's Island, Notre Dame Bay, Newfoundland.
- HILL, D. P. S. (1892). Larne, co. Antrim. M.B., B.Ch., B.A.O., R.U.I.
- HILL, E. B. (1883). Royal Hospital, Richmond. B.A., M.B., B.C., Cantab.
- HILL, R. A. L. (1890). 28, Arundel Street, Landport.
- HILLIAM, W. P. (1893). Wyke, nr Bradford, Yorks.
- HILLYER, W. H. (1882). Ellerslie, Buckden, Hunts.
- HINDLEY, G. J. D. (1895). 69, Queen's Road, Dalston. B.A. Oxon.
Obst. H.P.
- HINNELL, J. S. (1882). 62, Garland Street, Bury St. Edmund's. B.A., M.D., B.C. Cantab.
Ophth. Asst.
- HITCHCOCK, H. K. (1866). Christowell, Branksome Park, Bournemouth. M.D. Brux.; J.P.
- HOAR, C. (1879). The Grove, Robertsbridge, Sussex. M.B., C.M. Aberd.
- HOBHOUSE, E. (1884). 36, Brunswick Place, Brighton. M.D., B.Ch. Oxon.; M.R.C.P.
w 1885-6. 3rd Year Student, 2nd Coll. Prize. H.P., A.H.S.
- HOCKRIDGE, T. G. (1879). 27, Tysoe St., Wilmington Sq., M.D., C.M. McGill, Montreal.
- HODGES, H. B. (1853). Glenaveril, Knebworth, and Watton Cottage, Watton, Herts.
- HODGES, H. C. (1878). Watton, Herts.
- HODGSON, C. (1887). Layburn, Streatham.
- HODGSON, W. (1871). Gatefield House, Crewe, Chesh.
- HODSON, T. (1858). Ingatestone, Essex.
- HOLBERTON, H. N. (1876). Chetwynd, Palace Road, East Molesey, Surrey. D.P.H.
w 1876-7. 2nd Entrance Science Scholarship, and 2nd Coll. Prize.
w 1877-8. 2nd Year Student, 1st Coll. Prize. A.H.P.
- HOLDING, C. (1829). F.R.C.S.
- HOLLAND, E. W. (1878). B.A. Cantab.
- HOLLOWAY, R. (1876). Edgecumbe House, Brockhurst, nr. Gosport.
- HOLMES, E. R. (1895). Russell House, Shifnal, Salop. M.B., C.M. Edin.
- HOME, A. L. (1889). 41, Brondesbury Road, Kilburn. M.B., B.S. Lond.
w 1894-5. Bristowe Medal
H.S., A.H.S. Obst. H.P.
- HOOD, N. L. (1891). Castlegate House, York. B.A., M.D., B.C. Cantab.
- HOOPER, A. W. (1889). Ashdene, Burnt Ash Hill, Lee. A.M.S.
- HOOPER, J. H. (1857). 139, Burnt Ash Hill, Lee. M.D., M.S. Lond.; F.R.C.S.,
1859. 2nd Year Student, Coll. Prize.
- HOPE, G. (1881). Beaconsfield House, Uxbridge Road, Hanwell.
- HOPKINSON, E. (1893). B.A. Oxon.
Ophth. H.S. Clin. Asst. Ear Dept.
- HORLEY, W. L. (1851). Stanboroughs, Hoddesdon, Herts. (Retired).
- HOUGH, C. H. (1875). Full St. Derby.
- HOUGH, J. (1836). Grange Road Cambridge. F.R.C.S., J.P.
- HOUGHTON, L. (1873). 2, Sussex Square, Brighton.
- HOULGRAVE, A. (1880). 23, Great George's Rd., Waterloo, Liverpool.
- HOUNSELL, F. C. W. (1881). Dower House, Bugbrooke, Northants. B.A. Cantab.
Ophth. Asst.

- HOUSE, F. M. (1883). Katauning, Western Australia.
- HOW, A. B. (1883). Parkhurst, Claygate, Surrey.
- HOWELL, T. S. (1841). The Old Vicarage, Wandsworth.
- HOWLEY, E. J. (1889). 4, Lyons Terrace, Hetton, Durham.
- HOWSE, W. (1856). 8, London Street, New Swindon, Wilts.
- HUBBARD, A. J. (1876). Durrance House, Hemel-Hempstead, Herts. M.D. Durh.
- HUDSON, H. (1882). Mannargudi, Tanjore, S. India.
- HUDSON, J. S. (1888). 113, Leadenhall Street.
- HUDSON, O. H. (1881). Park House, Chesterfield Road, Sheffield.
- HUGHES, A. E. P. (1884). Camberwell Workhouse Infirmary. Ophth. H.S.
- HUGHES, R. (1889). M.B. Lond.
- HULBERT, H. H. (1884). 19, Bishop's Terrace, Fulham Palace Road. B.A. Oxon.
H.S., A.H.S., Clin. Asst. Throat and Ear Depts., Asst. Teacher of Pract. Surg.
- HULL, W. (1878). Cootamundra, N. S. Wales. M.D. Lond.
w 1878-9. 2nd Entrance Science Scholarship.
w 1881-2. The Mead Medal.
H.P., A.H.P., H.S., A.H.S., R.A.
- HUME, F. H. (1860). 53, Devonshire Street, Islington. M.D. St. And.
- HUME, F. N. (1871). Med. Superint. Northern Hosp., Winchmore Hill.
- HUNT, J. A. (1872). Brookfield, Borrowash, Derbysh.
w 1874. Prosecutor's Prize.
- HUNT, J. P. (1886). Surg.-Lt.-Col. Army. M.D. Glasg., F.R.C.S.I.
- HUNTLEY, L. (1842). 79, Freshfield Road, Kemp Town, Brighton.
- HUSKINSON, H. (1888). Surg. R.N. M.B. Durham.
- HUTCHINSON, J. A. (1883). Northalerton, Yorks. M.D., M.S. Durh.
- HUTTON, H. R. (1875). 16, St. John Street, Manchester. M.A., M.B. Cantab.
Demonst. of Physiol., Asst. Demonst. of Pract. Path. and H.P.
- IDESON, J. J. (1857). The Poplars, Colne, Lancash.
- ILES, A. R. (1872). Shutterne House, Taunton, Somers.
- ILES, D. (1861). Fairford, Glouc.
- ILLINGWORTH, J. A. (1856). Brig.-Surg. Army (retired).
- INGLIS, W. W. (1863). Glendower, Queen Anne Av., Bromley, Kent. M.D. Heidelb.
1864. 1st Year Student, 2nd Coll. Prize.
1865. 2nd Year Student, 2nd Coll. Prize.
1866. 3rd Year Student, 3rd Coll. Prize; Cheselden Medal.
Medical Registrar and H.S.
- IRVING, D. B. (1879). Vancouver, Brit. Columbia, Canada.
- ISAACS, E. P. (1885). New Brompton, Chatham. Ophth. H.S.
- IVES, R. (1854). Chertsey Lodge, Portswood, Southampton.
- JACKSON, J. (1868). 15, Huntingdon Street, Barnsbury.
- JAFFÉ, C. S. (1887). 138, Sutherland Avenue, Maida Vale. M.D., B.S. Lond.
w 1887-8. 1st Year Student, Half 2nd Coll. Prize.
H.P., Obst. H.P., Clin. Asst. Throat Dept. Salters' Company Research Fellow.
- JAMES, C. H. (1883). Surg.-Capt. Bengal Army.
w 1887-8. Solly Medal and Prize.
H.S., A.H.S., R.A.
- JAMES, F. C. (1889). 48, Tregunter Road, South Kensington. M.B. Durh.
- JAMES, J. M. (1885). 647, Queen's Road, Heeley, Sheffield.
- JAMES, S. (1886). Craig's Court, Simla, India.
- JARDINE, J. L. (1846). Capel, Dorking, Surrey.
1850. Medical Reports, Dr. Roots' Prize. H.S.
- JARVIS, J. (1881). 38, Gay Street, Bath.
- JEFFERSON, A. J. (1874). 2, West St., Rochdale. M.D., B.S. Lond.
- JEFFERSON, T. J. (1860). Market Weighton, Yorks. M.D. Aberd. H.S.
- JEFFREYS, A. (1886). Giants' Grave, Briton Ferry, Neath, S. Wales.
- JEFFREYS, J. G. (1874). M.D. Durh.
- JEFFREYS-POWELL, J. P. (1874). Senny Bridge, Brecon, S. Wales.
- JENNER, L. L. (1890). 4½, Bloomsbury Square. M.A., M.B., B. Ch. Oxon.; M.R.C.P. Supt. of Clinical Laboratory, St. Thos. Hosp.
s 1892. 3rd Year Student, 2nd Coll. Prize. Demonst. of Morbid Histology. H.P.
- JOHNSON, C. G. (1869). Harpur Villa, Bedford.
- JOHNSON, W. G. (1852). 68, High Street, Bedford.
1855. Comparative Anatomy, Prize.

- JOHNSTON, G. D. (1879). Georgia St., Vancouver, British Columbia, Canada. w 1882-3. 4th Year, Cheselden Medal. H.P., H.S., A.H.S., R.A., Ophth. Clin. Asst.
- JOHNSTON, T. (1878). Ilfracombe, North Devon.
- JOLLY, S. B. (1879). Godstone House, West Hill, Sydenham. M.B. Cantab.
- JONAS, H. C. (1891). Duxford, Cambs. w 1896-7. 5th Year Student, The Mead Medal. H.P.
- JONES, A. R. (1892). Glaslyn, Builth.
- JONES, A. W. (1885). Paddington High School. M.A. Oxon. s 1888 3rd Year Student, 1st Coll. Prize.
- JONES, B. S. (1884). 16, Kendoa Road, Clapham.
- JONES, C. E. (1891). Port Alfred, Cape Colony. Clin. Asst. Throat Dept.
- JONES, C. M. (1870). Glantaff House, Troedyrhiw, Glamorg. R.A.
- JONES, E. (1855). Ty-mawr, Aberdare, Glam. J.P.
- JONES, E. J. T. (1880). Ty-mawr, Aberdare, Glamorg.
- JONES, H. T. (1886). Harlech House, Pembroke, S. Wales.
- JONES, J. T. (1870). Hornsea, Hull.
- JONES, R. W. (1864). 77, Vauxhall Bridge Rd.
- JONES, SYDNEY (1850). 18, Portland Place. M.B. Lond.; F.R.C.S. Eng.; Consulting Surg. to St. Thos. Hosp. 1851. Matriculation Scholarship, Prize; 1st Year Student, Scholarship. 1852. 2nd Year Student, Scholarship. Descriptive Anatomy, Prize. 1853. 3rd Year Student, Scholarship. Late Member of Council, Royal College of Surgeons. Late Surg., Lect. on Surg., on Descrip. Surg., Surg. Anat., Ophth. Surg. and on Comp. Anat., Cur. of Mus., Demonst. of Healthy and Morbid Anat. at St. Thos. Hosp.
- JONES, S. H. (1881). 16, Kendoa Road, Clapham. M.B., B.S. Lond.; F.R.C.S. w 1881-2 1st Year Student, 1st Entrance Science Scholarship. The William Tite Scholarship. w 1882-3. 2nd Year Student, Half Musgrove Scholarship and 1st Coll. Prize combined. Prosector's Prize. w 1883-4. 3rd Year Student, 2nd tenure of Half Musgrove Scholarship, with 1st Coll. Prize. s 1884. 3rd Year Student, Half 1st and 2nd Coll. Prizes. w 1884-5. 4th Year Student, The Cheselden Medal. Treasurer's Gold Medal. H.S., A.H.S., Clin. Asst. Ear and Skin Depts.
- JONES, T. J. (1882). Langstone Court, nr. Ross, Hereford. B.A. Cantab., M.B., C.M. Edin.
- JONES, T. M. (1845). Kilby House, Loughor, Glamorg.
- JONES, W. W. (1877). Pinehurst, Barlow Moor Rd., Didsbury, Manchester. M.A., M.B. Oxon., B.Sc. Lond. w 1877-8. 1st Year Student; 1st Entrance Science Scholarship; £60; The William Tite Scholarship. w 1877-8. 1st Year Physical Society's Prize. s 1878. 1st Year Student, 1st Coll. Prize. w 1878-9. 2nd Year Student, The College Scholarship. s 1879. 2nd Year Student, 2nd Coll. Prize. w 1879-80. 3rd Year Student, 2nd tenure of Coll. Scholarship, and 1st Coll. Prize. w 1880-1. The Mead Medal; Treasurer's Gold Medal. H.P., H.S., A.H.S., R.A., Radcliffe Travelling Fellow, Oxford, 1880.
- JOTHAM, E. (1843). 270, Camden Road.
- JOTHAM, E. S. (1855). 63, Roe St., Macclesfield.
- JOTHAM, G. W. (1870). Shag Rock, Port St. Mary, Isle of Man. M.D., C.M. Aberd.
- JULIUS, H. A. (1886). Surg. R.N.
- KAI, HO (1875). 3, Elgin St., Hong Kong, China. M.B., C.M. Aberd.
- KAKA, S. M. (1884). Karachi, India.
- KAPADIA, S. A. (1881). 40, Glazbury Road, W. Kensington. M.D. Brux.
- KAVANAGH, P. J. F. (1887). 56, Queen's Gardens, Hyde Park.
- KEATES, W. C. (1869). 20, East Dulwich Road.
- KEELE, C. F. (1857). 3, Great Russell Street, Bloomsbury.
- KEELE, G. T. (1851). 81, St. Paul's Road, Highbury.
- KEELE, J. R. (1879). 3, Sussex Place, Southampton.
- KELLER, H. L. A. (1884). Elm House, Hornsey. B.A. Oxon.
- KELLOCK, T. H. (1886). 8, Queen Anne Street. M.A., M.D., B.C. Cantab.; F.R.C.S. Asst. Surg. Middlesex Hosp. and Hosp. for Sick Children. w 1889-90. 4th Year Student: The Cheselden Medal. H.S., A.H.S., H.P.

- KEMPE, C. M. (1859). Chantry House, New Shoreham, Sussex.
- KENNARD, H. P. (1890). M.B., B.S. Durh.
- KENT, P. W. (1890). Royal Orthopædic Hospital.
H.S., A.H.S., Clin. Asst. Ear Dept.
- KER, J. E. (1880). Asst. Surg., Colonial Hosp., Gibraltar.
- KERR, G. D. (1883). 14, Burlington Street, Kemp Town, Brighton.
- KERR, J. K. (1876). Glenaltans, Knock, Belfast. M.D., M.Ch. R.U.I.
- KESER, J. S. (1880). 11, Harley Street, Cavendish Square. M.D. Bâle; F.R.C.S. Eng.
- KEYWORTH, J. W. (1847). Moonta, S. Australia. M.D. Lond.
1848. *Materia Medica*, Prize;
1849. Midwifery, 3rd Prize;
Physical Society's Essay, Prize.
1850. Ophthalmic Reports, a Governor's Prize;
Essay on Neuralgia, Mr. Newman Smith's Prize.
1851. Comparative Anatomy, Prize;
Clinical Medicine, Prize;
Surgical Reports, Prize;
Midwifery, Prize;
Medical Reports, Prize;
Pathology, Prize;
Physical Society's Essay, Prize.
- KIDD, H. C. (1881). Bromsgrove, Worc. M.B. Lond.; F.R.C.S.
w 1881-2. 1st Year Student, 3rd Coll. Prize.
H.S., A.H.S., A.H.P. Clin. Asst. Ear Dept.
- KILHAM, C. S. (1880). 1, Barber Road, Crookesmoor, Sheffield.
- KILNER, W. J. (1869). 218, Ladbroke Grove, N. Kensington. B.A., M.B. Cantab.; M.R.C.P.
Electrician
- KILVERT, J. E. (1892).
- KING, A. (1886). Cradock, Cape Colony.
w 1886-7. 1st Year Student, 1st Coll. Prize.
s 1887. 1st Year Student, 1st Coll. Prize.
s 1888. 2nd Year Student, 1st Coll. Prize.
w 1888-9. 3rd Year Student, 3rd Coll. Prize.
s 1889. 3rd Year Student, 1st Coll. Prize.
w 1889-90. 4th Year Student; Treasurer Gold Medal.
H.P.
- KING, A. F. W. (1889). Cheriton, Epsom. Surg.-Lt. I.M.S.
Clin. Asst. Throat Dept.
- KING, P. (1884). 27, Gay Street, Bath. B.A., M.D., B.C. Cantab.
- KINGSFORD, B. H. (1888). Woking, Surrey. M.B. Lond.
- KINNERSLY, G. E. (1888).
- KIRKPATRICK, J. M.D. Toronto.
- KISCH, A. (1861). 61, Portsdown Road, Maida Vale.
- KITCHING, J. L. W. (1878). Cobham, Surrey. D.P.H.
- KNAGGS, R. H. E. (1873). Diego Martin, Trinidad, W. Indies.
- KNIGHT, H. (1888). Eskholme, Shirley, Southampton.
- KNOCKER, W. D. (1889). M.B. Lond.
Clin. Asst. Skin and Electr. Depts.
- LABEY, J. (1880). The Homestead, Grouville, Jersey.
- LAKE, R. (1880). 19, Harley Street, Cavendish Square. F.R.C.S. Asst. Surg. Royal Ear Hosp., Surg. Laryng. N. Lond. Hosp. for Consumption.
w 1881-2. 2nd Year Student, Prosector's Prize.
Clin. Asst. Ear Dept.
- LAKE, W. W. (1872). Topcroft, Guildford, Surrey. D.P.H.
Obst. H.P.
- LAMB, J. H. (1895). Hillside, Crediton, Devon. M.B., C.M. Edin.
- LAMBERT, F. S. (1885). Balgowan, Newland, Lincoln.
- LAMBERT, T. W. (1887). Kamloops, British Columbia, Canada. M.A., M.B., B.C. Cantab.
H.S., Clin. Asst. Skin Dept.
- LANCASTER, J. (1890). Surg.-Lt.-Col., I.M.S. Madras.
- LANDON, E. (1871). Dominion S.S. Co.
- LANGLEY, J. I. (1892).
- LANGTON, C. B. T. (1883). Chertsey.
- LANKESTER, A. C. (1885). Peshawur, India. M.D. Lond.
w 1885-6. 1st Year Student, 1st Coll. Prize.
w 1886-7. 2nd Year Student, Half 1st and 2nd Coll. Prizes.
w 1888-9. 4th Year Student, The Cheselden Medal.
H.S., A.H.S.
- LANCASTER, C. P. (1892). Peshawur.
- LANKESTER, F. J. (1882). 13, Belvoir Street, Leicester. D.D.S. Penna.; L.D.S.
- LANKESTER, H. (1849). 71, Evington Road, Leicester. J.P.
1850. 1st Year Student, Scholarship;
Descriptive Anatomy, 1st Prize
Chemistry, Prize.
1851. Physiology, Prize;
Materia Medica, Prize;
Medicine, Prize;
1852. 3rd Year Student, Scholarship;
Medical Cases, President's Prize;
Medicine, Prize;
Surgery, Prize;
Surgery and Surgical Anatomy, Cheselden Medal;
General Proficiency, Treasurer's Medal.
1853. Surgical Essay, President's Prize.
H.S.

- LANKESTER, H. H. (1880). Church Missionary Society, Salisbury Sqre. M.D. Lond.
w 1880-1. Entrance Science Scholarship; 1st Year Student, 2nd Coll. Prize.
w 1881-2. 2nd Year Student, The College Scholarship, Two Years.
H.P., R.A.
- LASLETT, M. H. (1890). Surg. Ocean S.S. Co.
- LATROBE, F. S. (1858).
- LATTER, C. (1888). 10, Earl's Avenue, Folkestone. B.A., M.D., B.C. Cantab.
w 1890-1. 4th Year Student, The Mead Medal.
H.P., Obst. H.P.
- LAUHLAN, C. A. (1890). 43, Clapham Road. M.D., C.M. Montreal.
- LAVER, A. H. (1869). 26, Cemetery Road, Sheffield. M.D. Durh.
1870. 1st Year Student, 3rd Coll. Prize.
1871. 2nd Year Student, 2nd Coll. Prize.
w 1872. 3rd Year Student, 2nd Coll. Prize. Cheselden Medal.
H.S., H.P.
- LAVER, H. (1854). Head Street, Colchester. J.P.
- LAVER, J. W. (1889). High Street, Dedham, Colchester.
H.P., Clin. Asst. Skin Dept.
- LAVER, P. G. (1886). Head Street, Colchester.
- LAW, R. R. (1889). The Maples, Sidcup, Kent. B.A., M.D., B.C. Cantab.
H.S., A.H.S., Clin. Asst. Skin Dept.
- LAWFORD, J. B. (1879). 99, Harley St., Cavendish Square. M.D. C.M. McGill, Montreal; F.R.C.S., Ophth. Surg. and Lect. on Ophthalmology St. Thos. Hosp. Surg. Roy. Lon. Ophth. Hosp.
Ophth. Clin. Asst., A.H.P.
- LAWRIE, T. H. (1889). St. Clair, Polmont, Stirlingsh.
- LAWS, C. U. (1886). 65, Osborne Rd., Newcastle-on-Tyne. M.D. Durh.
- LAWS, W. G. (1888). 3, East Circus St., Nottingham. M.B., C.M. Edin.; F.R.C.S.
Ophth. H.S.
- LAWSON, R. (1889). 27, Nightingale Lane, Balham.
Clin. Asst. Skin Dept.
- LAWTON, H. A. (1868). 98, High St., Poole, Dorset. M.D. Durh.; D.P.H.
- LAXTON, T. L. (1875). Artillery Camp, Pretoria, Transvaal.
w 1876-7. 2nd Year Student, Prosector's Prize.
- LAYTON, F. G. (1890). St. Stephen's Vicarage, Hounslow.
H.P. Clin. Asst. Ear Dept.
- LEATHAM H. B. (1874). New Plymouth, New Zealand.
- LEDYARD, W. E. (1870). 223, Post Street, San Francisco, California, U.S.A. M.B. Toronto.
- LEES, J. (1859). 21, Brixton Rd. M.D. St. And.
Demonstr. of Morb. Anat., Asst. Res. Med. Off., Med. Tutor and Registrar.
- LEESON, J. R. (1871). Clifden House, Twickenham, Middlesex. M.D., C.M. Edin.
Demonstr. of Anat. and H.P.
- LEICESTER, T. (1880). 7, East Dulwich Road, East Dulwich.
- LESSEY, S. S. (1878). 13, Abinger Rd., Deptford.
- LEVICK, H. D. (1887). Royal Free Hospital. M.B. B.S. Lond.; F.R.C.S.
Jun. Obst. H.P.
- LEWELLIN, A. J. R. (1877). Melbourne, Victoria, Australia. M.B., B.Ch. Melb.
- LEWERS, T. R. (1880). Lyntonstowe, Berry, New South Wales. M.B., B.Ch. Melbourne.
- LEWIS, C. M. (1881). Steyning, Sussex.
- LEWTAS, J. T. (1885). Surg.-Lt.-Col. I.M.S. Bengal. Jun. Army and Navy Club, St. James's St. M.D., Lond.
- LIGHT, E. M. (1880). 2, Wilton Place, Belgrave Square. M.A., M.B., B.C. Cantab.
Clin. Asst. Throat Dept.
- LIGHTFOOT, W. S. (1872). Staff-Surg. R.N.
- LINDLEY, L. H. (1891). B.A., M.B., B.Ch. Oxon.
- LINDSAY, H. S. (1885). Longreach, Queensland.
- LINGARD, A. (1870). Imperial Bacteriologist, Muktesar, Kumâon Hills, N.W.P., India. M.B., M.S. Durh.; D.P.H.
H.P.
- LITHGOW, J. M. (1880). 39, Humberstone Road, Leicester. M.D., M.Ch. R.U.I.
- LITTELJOHN, S. G. (1864). Res. Med. Off. Central Lond. Distr. Schools, Hanwell. M.B., C.M. Edin.
- LIVESEY, E. W. (1885). Alderney, Channel Islands.
- LLEWELLYN, D. W. H. (1878). Southborough, Tunbridge Wells.
- LLOYD, A. (1857). 25, Larkhall Rise, Clapham.
- LOCKYER, C. W. (1886). 7, St. Julian's Farm Road, West Norwood.

- LODGE, P. G. (1893). 110, Preston Street, Bradford, Yorks.
- LODGE, S. (1888). 28, Manor Row, Bradford, Yorks. M.D., B.S. Durh.
- LOGAN, R. R. W. (1883). Ashby-de-la-Zouch.
- LONGINOTTO, M. J. (1889). 21, Central Road, Johannesburg.
- LONGMAN, A. (1877). Broad Chalk, Salisbury.
- LONGSTAFF, G. B. (1873). Highlands, Putney Heath, and Twitchen, Morthoe, N. Devon. M.A., M.D., D.P.H. Oxon.; F.R.C.P.; L.C.C.
w 1873-4. 1st Year Student, 2nd Coll. Prize.
s 1874. 1st Coll. Prize.
Physical Society's 1st Year's Prize.
s 1875. 2nd Year Student, 2nd Coll. Prize.
w 1875-6. 3rd Year Student, 1st Coll. Prize.
w 1876-7. 4th Year Student, Mead Medal.
- LONNON, F. (1894). Fern House, 77, Denmark Hill. L.D.S.
- LOTZ, H. J. (1882). Fremantle, West Australia. D.P.H.
- LOW, H. (1885). 10, Evelyn Gardens, South Kensington. M.A., M.B., B.C. Cantab. Anæsthetist St. Thomas's Hospital. Tel. Linificus, London.
H.P., R.A., S.O.C., Clin. Asst. Skin Dept.
- LOW, P. C. (1886). Elmstead, Beulah Road, Tunbridge Wells, Kent. B.A., M.B., B.C. Cantab.
- LOW, R. B. (1872). Local Govt. Bd., Whitehall and Helmsley House, Christchurch Road, Tulse Hill. M.D., C.M. Edin.; D.P.H. Cantab.
- LOW, W. S. (1887). 50, Herne Hill, and 10, Westminster Bridge Road.
- LOWE, H. (1893). Eastbourne, Acock's Green, Worc.
- LUARD, H. B. (1885). Surg.-Capt. Bengal Army. B.A., M.B., B.C., D.P.H., Cantab. F.R.C.S.
s 1886. 3rd Year Student, 2nd Coll. Prize.
H.P., R.A.
- LUCAS, G. (1863). Uckfield, Sussex.
- LUNN, J. R. (1874). Med. Superint. St. Marylebone Infirm., Notting Hill. F.R.C.S. Edin.
H.S., R.A., A.H.S., A.H.P.
- LUSH, J. S. (1872). Ivy Cottage, Market Lavington, Devizes, Wilts.
s 1873. 1st Year Student, 3rd Coll. Prize.
- LUSH, W. H. (1869). Prospect House, Market Lavington, Devizes, Wilts.
w 1872. 2nd Year Student, Prosector's Prize.
- LYNCH, G. W. A. (1882). Ba, Fiji. M.B., B.C. Cantab.
- LYON, T. G. (1878). 1, Victoria Square, Pimlico. M.A., M.D. Cantab.; M.R.C.P.
H.P., Clin. Asst. Skin and Ear Dept.
- MACAULEY, W. G. R. (1888). Kings Lynn, Norfolk.
- MCCLEAN, J. F. (1893).
s 1895. 2nd Year's Student, 1st Coll. Prize.
H.S., A.H.S.
- MACCORMAC, Sir William, Bart. 13, Harley Street, Cavendish Square. M.A.R.U.I. M. Ch. (hon. causâ). D. Sc., F.R.C.S.I.; Pres. R.C.S. Eng. Cons. Surg. to St. Thomas's Hospital; Emeritus Lecturer on Clinical Surgery.
Surgeon, Jt. Lect. on Surgery.
- MCCULLAGH, R. C. (1887). 179, Shankhill Rd., Belfast. B.A., M.D., M.Ch., R.U.I.
- MCDONNELL, J. O'M. (1879). Surg.-Lt.-Col. Bengal Army (retired). M.D., M.Ch. R.U.I.; F.R.C.S.
- MCDUGALL, W. (1894). M.A., M.B., B.C. Cantab.
w 1894-5. 3rd Year Student, University Scholarship.
w 1896-7. 5th Year Student, Grainger, Testimonial Prize.
H.P.
- MCDOWELL, D. K. (1886). c/o Messrs. Holt & Co., 17, Whitehall Place.
- MACEVOY, H. J. (1882). 41, Buckley Road, Brondesbury. M.D., B.Sc. Lond.
w 1884-5. 3rd Year Student, Half 2nd and 3rd Coll. Prizes.
s 1885. 3rd Year Student, Half 1st and 2nd Coll. Prizes.
w 1885-6. 4th Year Student, Bronze Mead Medal.
H.P., R.A., Clin. Asst. Throat and Ear Depts.
- MCGEAGH, W. S. (1880). 15, Louisville Road, Upper Tooting.
- MACGREGOR, R. D. 3, Sandyford Place, Glasgow.
- MCILROY, J. B. (1887). Annandale, Sydney, New South Wales.
- MAC KELLAR, A. O. 79, Wimpole Street, M.D., M.Ch., R.U.I., F.R.C.S. Surgeon, Res. Asst. Surg.
Lect. on Forensic Medicine, and Practical Surgery.
- MACKENZIE, H. W. G. (1882). 59, Welbeck St., Cavendish Square. M.A. Edin.; M.A., M.D. Cantab.; F.R.C.P. Lond.; Assistant Physician to St. Thomas's Hospital and to the Hosp. for Consumption, Brompton; Demonstrator of Morbid Anatomy; Lecturer on Pharmacology and Therapeutics at St. Thomas's Hospital.
w 1882-3. 3rd Year Student, 3rd Coll. Prize.
s 1883. 3rd Year Student, 1st Coll. Prize.
w 1883-4. 4th Year Student. The Mead Medal.
Demonst. of Pract. Med., Resident Assistant Physician, Medical Registrar, H.P., A.H.P., and Clin. Asst. Skin Department.

- MACKINNON, A. D. (1887). Uganda, Brit. E. Africa. M.D. Aberd.
- MACKRETH, J. F. Keyingham, Holderness, Hull.
- MCLAUGHLIN, E. H. (1872). 45, Jeffreys Rd., Clapham Rd.
- MACLEAN, A. (1869). 10, Mitre Court Chambers, Temple.
- MACLEAN, H. H. (1878).
- MACNAMARA, J. T. (1881). 50, Union Road, Rotherhithe.
- MAC RAE, F. (1888). 25, Half Moon Street, Mayfair. M.B., C.M. Aberd.
- MACTAVISH, J. W. (1886).
- MADDEN, T. P. (1877). Falmouth, Jamaica, M.D., M.Ch.R.U.I.
- MADDICK, E. D. (1874). 2, Chandos St., Cavendish Sq., F.R.C.S. Edin.
- MAILE, C. E. D. (1873). Dedham House, Dedham, Essex.
- MAKINS, G. H. (1871). 47, Charles Street, Berkeley Square. F.R.C.S. Asst. Surg., Joint Lect. on Anat., and Joint Teacher of Op. Surg. St. Thomas's Hospital; Exam. in Anat. for Conjoint Board Eng. and for Army, Navy and Indian Medical Services.
Dean of Med. School Surg. Registr., Res. Asst. Surg., H.P., H.S.
- MANLEY, W. G. N. (1850). C.B., V.C. Surg.-Gen. Army (retired). 3, Lansdowne Terrace, Cheltenham.
- MANNERS, W. F. (1881). Pewsey, Wilts. B.A. Cantab.
- MANSEL-HOWE, S. I. (1871). Athelby, Hillbury Rd., Tooting. M.D. Brux. H.P., R.A.
- MAPLES, R. (1870). Tower Hill House, Kingsclere, Newbury, Berks. H.S., R.A.
- MARCH, H. C. (1857). Portesham, Dorchester. M.D. Lond., J.P.
1858. 1st Year Student, Treasurer's 2nd Prize.
H.S., R.A.
- MARGENOUT, J. G. (1884). 59, Hayter Road, Brixton.
- MARLOW, F. W. (1876). 401, Montgomery St., Syracuse, New York. H.S., A.H.P., Opth. Clin. Asst.
- MARRIAGE, H. J. (1891). 35, Wickham Road, Beckenham.
w 1893-4. 2nd Year Student, 2nd Coll. Prize. Clin. Asst. Throat Dept.
H.S., A.H.S.
- MARRINER, W. H. L. (1878). Craig Vaen, Poole Rd., West Bournemouth. M.B. Lond.
Clin. Asst. Ear and Throat Depts.
- MARSACK, A. E. (1878). Whangarei, Auckland, New Zealand.
- MARSDEN, T. (1877). Larkstone, Ilfracombe, N. Devon. M.D., C.M. Aber.
- MARSH, J. H. (1872). Heathfield, Sussex.
- MARSHALL, A. (1886). 145, London Rd. South, Lowestoft. M.D. Brux.
- MARSHALL, J. G. (1878). B.A., M.B. Cantab.
- MARSTON, F. E. (1877). High Street, Welshpool, Montgomeryshire. A.H.P.
- MARTIN, C. J. (1884). Physiological Lab., Univ. of Sydney, N.S. Wales. D.Sc., M.B. Lond.
w 1884-5. 1st Year Student, 2nd Entrance Scholarship.
- MARTIN, F. R. (1895). Overtown House, Spring Grove, Isleworth. B.A., M.B., B.C. Cantab.
Clin. Asst. Ear Dept.
- MARTIN, J. S. (1896). Royal Infirmary, Sheffield. M.B., M.S. Edin.
- MARTIN, T. H. (1886). The Gables, Crawley, Sussex.
- MARTINEAU, A. J. (1891). General Hospital, Nottingham.
s 1892. 1st Year Student, 1st Coll. Prize.
w 1892-3. 2nd Year Student, 1st Coll. Prize.
w 1893-4. 3rd Year Student, 2nd Coll. Prize.
w 1894-5. 4th Year Student, Cheselden Medal (bronze) and Treasurer's Gold Medal.
H.S., A.H.S.
- MASON, A. E. (1876). 61, Hillfield Road, West Hampstead.
- MASON, F. W. (1888). York Dispensary.
- MASON, G. A. (1888). 45, George St., Portman Square. M.A., M.B., B.C. Cantab.
- MASSEY, H. M. (1877). Hillgrove, New South Wales.
- MASSEY, H. T. (1875).
- MATHIAS, W. L. (1882). 114, Darlinghurst Road, Sydney, N.S. Wales.
- MATTEI, C. (1882). Hillend, New South Wales.
- MATTEI, E. (1879). Accra, Gold Coast, West Africa.
- MATTHEWS, C. E. (1885). Med. Superint. Fountain Hosp., Tooting Grove. B.A., M.D., B.Ch. Oxon., D.P.H.
Clin. Asst. Throat Dept.
- MATURIN, B. A. (1883). Surg.-Maj. Army.

- MAUNSELL, D. F. (1888). 67, Farl's Court Road, Kensington.
- MAURICE, O. C. (1856). 75, London Street, Reading.
- MAURICE, W. J. (1880). 11, Friar Street, Reading. M.A., M.B., B.Ch. Oxon.
- MAVOR, W. S. (1869). Waltham Cross, Herts. M.D. Durh. H.P.
- MAYBURY, A. C. (1861). 19, Bloomsbury Square. D.Sc. Lond.
- MAYBURY, A. V. (1869). Ashford House, Mile End, Landport. M.D., M.Ch. R.U.I.
1870. 1st Year Student, 2nd Coll. Prize.
1871. 2nd Year Student, 1st Coll. Prize.
w 1872. 3rd Year Student, 1st Coll. Prize ;
Treasurer's Gold Medal.
H.S.
- MAYBURY, H. M. (1868). 27, Almeida St., Islington. M.D., M.Ch. R.U.I.
1869. 1st Year Student, 2nd Coll. Prize.
1871. 3rd Year Student, 3rd Coll. Prize.
- MAYBURY, L. (1874). 9, Hampshire Terrace, Southsea. M.D., M.Ch. R.U.I.
- MAYBURY, W. A. (1866). 9, West Stockwell Street, Colchester, Essex. M.D., M.Ch. R.U.I.
1867. 1st Year Student, 3rd Coll. Prize.
- MAYNARD, E. C. (1877). Berkeley House, Richmond Hill, Surrey.
- MAYNARD, J. C. M. (1854). Erith, Kent. M.R.C.P. Edin., J.P.
- MEACOCK, H. C. (1892). 43, Spencer Park, Wandsworth Common.
- MEAD, H. T. H. (1856). Christchurch, Hants. (retired).
- MEADOWS, B. (1854). 141, Victoria St., Westminster.
- MEADOWS, H. (1866). 33, London Rd., Leicester. M.B., C.M. Edin.
1867. 1st Year Student, The William Tite Scholarship ;
Phys. Soc. 1st Year's Prize.
1868. 2nd Year, Tite Scholarship ;
Phys. Soc. 2nd Year's Prize.
- MEASURES, J. W. (1868). 62, Burgoyne Rd., Haringay. (Not practising.)
- MEGGITT, H. (1882). York Lodge, Norwood Road.
- MELSOME, W. S. (1890). Mineral Water Hospital, Bath. M.A., M.D., B.C. Cantab., F.R.C.S. Late Demonstr. of Anat. Univ. Camb.
- MENNELL, Z. (1874). 1, Royal Crescent, Notting Hill.
- MERCES, J. (1880).
- MERRY, W. J. C. (1890). 1, Cleveland Square, Hyde Park. M.A., M.D., B.Ch. Oxon.
H.P., H.S., Clin. Asst. Skin Dept.
- METCALFE, A. W. (1887). 3, Museum Street, York. M.A., M.D., B.C. Cantab.
- METCALFE, G. (1887). 22, Eldon Square, Newcastle-on-Tyne. M.D., B.S. Durh.
- METCALFE, R. (1856). Leyburn, Yorks. M.D. St. And.
- MICHAEL, H. J. (1874). Surg.-Maj. Army.
- MICKLE, W. J. (1867). Med. Superintendent, Grove Hall Asyl., Bow. M.D. Toronto, F.R.C.P.
- MIDDLETON, R. W. (1881). 17, Hartington Terrace, Beach Road, Southsea. M.B., C.M. Glasg.
- MIFSUD, A. E. (1881). 17, Strada Zaccaria, Valetta, Malta.
- MILLAR, A. F. (1893).
- MILLAR, W. H. (1886). St. Helier's, 26, Streatham Hill. M.D. Brux.
w 1888-9. 3rd Year Student, 2nd Coll. Prize.
s 1889. 3rd Year Student, 2nd Coll. Prize.
Clin. Asst. Throat Dept.
- MILLER, F. M. (1864). Northolme, High Road, Upper Clapton.
- MILLER, H. L. (1874). Warrnambool, Victoria, Australia.
- MILLER, J. (1877). 136, South Lambeth Road.
- MILLER, J. T. R. (1883). Castlegate House, 78, Castlegate, Malton, and Leavening, Kirkham Abbey, Yorks.
- MILLS, H. W. (1890). Ruardean, Glouc.
- MILLS, R. J. (1873). 35, Surrey St., Norwich. M.B., C.M. Aberd.
- MILLS-ROBERTS, R. A. (1893). Festiniog.
- MILLS-ROBERTS, R. H. (1882). 24, Bangor Street, Carnarvon. F.R.C.S. Edin.
- MILTON, A. R. O. (1888). Hatton, Dickoya, Ceylon.
w 1891-2. 4th Year Student, The Mead Medal.
H.P., H.S., A.H.S.
- MILTON, F.R.S. (1884). Surgeon and Professor of Clinical Surgery, Kasr-el-Aini Hospital, Cairo, Egypt. H.S., A.H.S.
- MILTON, H. M. N. (1876). Kasr el Aini Hospital, Cairo, Egypt. H.S., A.H.S., H.P., A.H.P.

- MILWARD, F. V. (1891). General Hospital, Birmingham. B.A., M.B., B.C. Cantab.
Clin. Asst. Skin and Ear Dept.
- MISKIN, E. (1888). 173, Kennington Road. M.B. Lond.
s 1890. 2nd Year Student, 1st Coll. Prize.
- MISKIN, G. A. (1858). 173, Kennington Road M.D. St. And.
- MISKIN, L. J. (1889). Perth, Western Australia. M.B., B.S. Lond. F.R.C.S.
w 1889-90. 1st Year Student, 2nd Coll. Prize.
w 1890-1. 2nd Year Student, Half first and 2nd Coll. Prizes.
s 1891. 2nd Year Student, 2nd Coll. Prize. H.S., A.H.S.
- MITCHELL, Rev. J. (1865). The Vicarage, Yealand Conyers, Carnforth. Lanc. M.D. St. And. M.R.C.P. Edin.
1866. 1st Year Student, 2nd Coll. Prize; Phys. Society's 1st Year Prize.
1867. 2nd Year Student, 2nd Coll. Prize.
1868. 3rd Year Student, 2nd Coll. Prize. R.A.
- MITCHELL, R.N. (1851). Brookwood, Hollington, St. Leonards-on-Sea. M.D. St. And.
- MONEY, F. J. (1848). 29, East Road, Hoxton. M.D. Lond.
1849. Descriptive Anatomy, 2nd Prize; Chemistry Prize; Materia Medica, 1st Prize; Matriculation Scholarship, Prize; 1st Year Student Scholarship.
1850. Physiology, Prize; Comparative Anatomy, Prize; Descriptive Anatomy, Prize; Medicine, Prize;
1851. Midwifery, Prize; Medicine, Prize; Physical Society's Essay, Prize; Surgery, Prize; Surgery and Surgical Anatomy, Cheselden Medal; General Proficiency, Treasurer's Gold Medal.
- MONTAGUE, A. A. (1891). Rosenau, St. Margarets, Twickenham. M.B. Lond.
- MONTAGUE, A. J. H. (1881). 35, Potter St., Worksop. M.D. Durh. H.P., Clin. Asst. Skin Dept.
- MONTGOMERY, W. A. (1888).
- MOODY, J. M. (1871). Med. Superint. Lond. Co. Asyl., Cane Hill, Purley, Surrey.
- MOORE, D. (1858). Woodthorpe, Sydenham Hill Rd. (not practising). M.D. St. And.
- MOORE, H. M. (1888). Surg-Capt. I.M.S. Bombay.
Clin. Asst. Ear Dept.
- MOORE, P. L. (1891). Fountain Hospital, Lower Tooting.
- MOORES, S. G. (1882). Surg.-Capt. Army.
- MORETON, J. E. (1849). Tarvin, Chester. F.R.C.S.
1850. 1st Year Student, Scholarship;
1852. Physiology, Prize; Descriptive Anatomy, Prize; Physical Society's Essay, Prize; Medicine, Prize; Surgery, Prize; 2nd Year Student, Scholarship.
1853. 3rd Year Student, Scholarship; Physiology, Prize; Clinical Medicine, Pres. Prize; Clinical Medicine, Treas. Prize; Clinical Medicine, Mr. N. Smith's Prize; Ophthalmic Surgery, Prize; Medicine, Prize; Surgery and Surgical Anatomy, Cheselden Medal; Gen. Proficiency, Treas. Medal.
1854. Clinical Med., Dr. Root's Prize. H.S.
- MORETON, R. (1890). Ivanhoe, Hartford, Cheshire.
- MORETON, T. (1856). Northwich, and Spring Mount, Hartford, Chesh.
1857. 1st Year Student, Treasurer's and Prize; Matriculation Examination, Classics and Mathematics, Prize.
1858. Clinical Medicine, Prize. H.S., R.A.
- MORETON, T. W. E. (1885). Tarvin, Chester B.A. Cantab.
- MORGAN, C. A. (1883). Greenhill, Thorncombe, Chard.
- MORGAN, L. W. (1861). The Hafod, Pont-y-pridd, Glamorg. M.D., C.M. Aberd. J.P.
- MORGAN, Ll. A. (1878). 118, Bedford Street, Liverpool. M.D. Durh.
- MORGAN, S. (1851). 15, Oakfield Rd., Clifton, Bristol. M.D. St. And.
1854. Forensic Medicine, 2nd Prize.
- MORGAN, W. (1872). 3, Adelaide St., Swansea. R.A.
- MORGAN, W. L. G. (1865). The Pines, Boscombe, Hants.
- MORRIS, C. K. (1873). Gordon Lodge, Charlton Road, Blackheath.
w 1875. Prosector's Prize.
- MORRIS, E. H. G. (1888). 8, Gloucester Terr., Onslow Gdns, S. Kensington. B.A., M.B., B.C. Cantab. Anæsthetist St. Thomas's Hospital. Tel.: "Emphatic London."
- MORRIS, E. W. (1882). Kembla House, Port Adelaide, S. Australia.
- MORRIS, J. E. (1867). Windhill, Bishop's Stortford, Herts. M.D. Durh.

- MORRIS, S. G. Nantgaredig, Carmarthen. M.D., C.M. Edin.
- MORTON, J. (1860). Eastgate House, Guildford. M.B. Lond.
H.S., R.A.
- MOULLIN, J. A. M. (1871). 69, Wimpole St., Cavendish Square. M.A., M.B. Oxon.; M.R.C.P.
H.P.
- MOXON, C. C. (1885). Market Place, Pontefract.
- MUNRO, A. W. (1882). Liverpool Street, Sydney, N.S. Wales. M.D., C.M. Edin. F.R.C.S.
- MUSSON, A. W. (1887). 15, King St., Clitheroe, Lanc. B.A., M.B., B.C. Cantab.
- MUSSON, W. E. (1849). Clitheroe, Lanc.
1850. Matriculation Scholarship, Prize.
- MYERS, W. (1894). M.A., M.B., B.C. Cantab. B.Sc. Lond.
- NAIRN, R. (1881). Hastings, Napier, New Zealand. F.R.C.S.
Ophth. Asst., H.P.
- NASH, E. H. T. (1890). 36, The Avenue, Bedford Park.
1896. Solly Medal and Prize.
H.P., Clin. Asst. Ear Dept.
- NAUTH, B. (1890). Surg.-Capt. I.M.S. Madras.
- NEATE, C. P. W. (1855). Stilton, 15, London Road, Forest Hill. F.R.C.P., F.R.C.S. Edin.
- NETTLESHIP, E. 5, Wimpole Street, Cavendish Square. F.R.C.S. Cons. Oph. Surg. St. Thomas's Hospital.
Ophth. Surg., Dean of Med. Sch.
- NEWBOULD, N. J. (1878). Abbots Bromley, Staff.
- NEWBY, C. H. (1866). 20, Landport Terr., Southsea, Hants. F.R.C.S.
1870. Prosector's Prize.
Surg. Regist., H.S., H.P., R.A., Asst. Demonstr. of Anat.
- NEWCOMBE, C. F. (1882). Victoria, British Columbia. M.D., C.M. Aber.
- NEWINGTON, A. S. L. (1872). Woodlands, Ticehurst, Sussex. M.B. Cantab.
H.P.
- NEWINGTON, T. (1874). Ridgeway, Ticehurst, Sussex. B.A. Cantab.
- NEWSHOLME, A. (1875). Town Hall, and 11, Gloucester Place, Brighton. M.D. Lond.; F.R.C.P.
w 1875-6. 1st Year Student, 1st Coll. Prize.
w 1876-7. 2nd Year Student, 1st Coll. Scholarship.
s 1877. Ditto 1st Coll. Prize.
w 1877-8. 3rd Year Student, The "College Scholarship," 1st Coll. Prize.
H.P., A.H.P., A.H.S., R.A.
- NEWTH, A. H. (1864). Hayward's Heath, Sussex. M.D. Aberd. Mem. Gen. Counc. Univ. Aberd.
- NICHOL, F. E. (1882). 11, Ethelbert Terr., Margate. M.A., M.B., B.C. Cantab.
H.S., A.H.S., Clin. Asst. Skin Dept.
- NICHOLSON, F. (1872). 29, Albion St., Hull. M.D. Lond. Phys. Hull Roy. Infirm.
w 1873. 1st Year Student, 1st Coll. Prize.
s 1873. Ditto 1st Coll. Prize.
w 1874. 2nd Year Student, 1st Coll. Prize.
s 1874. Ditto 1st Coll. Prize.
w 1875. 3rd Year Student, 1st Coll. Prize;
Cheselden Medal;
Mead Medal;
Treasurer's Gold Medal.
R.A., H.P., H.S.
- NICHOLSON, T. G. (1889). Palmers, Gt. Marlow. M.B., B.Sc. Lond.
w 1889-90. 1st Year Student, 1st Entrance Science Scholarship.
H.P., Clin. Asst. Skin Dept.
- NIVEN, J. (1878). Public Health Office, Town Hall, Manchester. M.A. Aberd.; M.A., M.B., B.C. Cantab.
- NIX, H. W. (1888). Gov. Med. Off. Marble Bar, Pilbarra Gold Field, W. Australia. B.A., M.B., B.C. Cantab.
H.S., A.H.S.
- NIX, R. E. (1891). 14, Warkworth Street, Cambridge. B.A., M.B., B.C. Cantab.
H.P.
- NOLAN, M. J. (1892). Trafford House, Old Trafford, Manchester.
- NORRIS, E. S. (1875). 117, High St., Eton, Bucks. M.A., M.B. Cantab.
Med. Regist. and Asst. Demonstr. of Morb. Anat.
- NORTHCOTE, P. (1887). Billesdon, near Leicester. M.B. London.
H.P.
- NORTON, J. J. (1887). Bagnalstown, Co. Carlow.
- NOWELL, A. H. (1856). Clarendon House, Mortlake.
- OBORN, H. W. (1885). 1, Hyde Vale Villas, Hyde Vale, Greenwich.
- ODDIE, S. I. (1891). 5, St. Helen's Terrace, Hastings. M.B., C.M. Edin.
Surg. R.N. (retired).
- ODLING, A. E. (1876). Alford, Linc.
- OGILVIE, J. (1890). B.A. Cantab. 5, Grenville Place, Cromwell Road.
- OKELL, J. B. (1880). 2, Magdala Rd., Nottingham.
- OLDING, A. E. (1881).
- OLIVEY, W. J. (1881). Lawlers, West Australia.
- ORANGE, W., C.B. (1853). The Bryn, Godalming. M.D. Heidelb., F.R.C.P. Lond.

- ORD, G. R. (1855). Streatham Hill.
- ORD, G. W. (1881). Mildenhall, Suffolk.
- ORD, R. W. (1888). 4, Cambridge Terrace, Dover. M.A., M.B., B.C. Cantab. A.H.S.
- ORD, W. M. (1852). 37, Upper Brook Street. M.D. Lond., F.R.C.P. Cons. Physician to St. Thos. Hosp.
1853. Matriculation Exam. Scholarship; 1st Year Student, Scholarship; Descriptive Anatomy, Prize; Chemistry, Prize.
1854. 2nd Year Student, Scholarship; Medicine, Prize; Materia Medica, Prize; Physiology, Prize.
1855. 3rd Year Student, Scholarship; Surgery and Surgical Anatomy, Cheselden Medal; Forensic Medicine, Prize; Pathology, Prize; Practical Chemistry, Prize; Physiology, Prize; General Proficiency, Treasurer's Medal.
1856. Registrar, Prize.
- Physician, Joint Lecturer on Medicine. Lecturer on Comparative Anatomy, Physiology, and Practical Physiology, Demonstr. of Anat., Surg. Registr. and H.S.
- ORD, W.W. (1883). The Hall, Salisbury. M.A., M.D., B.Ch. Oxon., M.R.C.P.
- s 1884. 1st Year Student, 2nd Coll. Prize.
- w 1884-5. 2nd Year Student, Half 2nd Coll. Prize.
- w 1886-7. 4th Year Student, Mead Medal. H.P., H.S., A.H.S.
- ORFORD, J. (1877). Starfield House, Pontefract, Yorks. H.S., H.P., R.A.
- ORISADIPE OBASA (1885) of Ikija (Prince), Lagos, W. Africa.
- ORONHYATEKHA, A. (1894). 24, Charing Cross. M.D. Toronto.
- OSBORN, S. (1867). 10, Maddox Street, Regent Street. F.R.C.S., J.P. Surgeon to the Hospital for Women, Soho Square.
1870. Physical Society, 2nd Year's Prize. Surgical Registrar, H.S., H.P., R.A.
- OSBORNE, A. (1892).
- OSBORNE, F. (1882).
- OSBURN, H. B. (1884). Bagshot, Surrey. D.P.H. R.A., S.O.C.
- OWEN, C. W. (1869). C.I.E., C.M.G. Surg.-Lt.-Col. Bengal Army.
- PAGE, F.W.T. (1891). 60, Westbourne Park Villas, Bayswater.
- PALIN, E. W. (1891). 18, Gloucester Rd., Ross. M.A., M.B., B.Ch. Oxon. H.P., Clin. Asst. Ear Dept.
- PALIN, H. V. Wrexham. M.B., C.M. Edin., J.P. Mayor of Wrexham, 1889-90-1.
- PALMER, A. M. (1867). Whittington, Chesterfield.
- PALMER, H. G. (1879). 83, Milkwood Road, Herne Hill.
- PALMER, H. J. (1874). Long Eaton, Nottingham.
- PAPILLON, J. W. (1876). Brent Knoll, Bridgwater, Somers.
- PAPILLON, T. A. (1876). 3, Pevensey Rd., St. Leonard's-on-Sea. F.R.C.S. Edin.
- PANIOTY, J. E. (1878). 1, Larkin's Lane, Calcutta, India.
- PARK, J. R. S. (1879). 183, King Street, Dukinfield, Cheshire.
- PARKER, G. R. W. (1885). 19, Derby Lane, Stoneycroft, Liverpool. M.A. Cantab.
- PARKER, G. W. (1860). 11, Brandenburg Road, Chiswick. M.R.C.P. Lond. M.R.C.P. Edin.
- PARKER, R. W. (1860). 13, Welbeck Street, Cavendish Square.
- PARKER, W. T. (1873). 68, Lillie Road, Fulham.
- PARROTT, J. (1869). Stanhoe House, Grove Vale, East Dulwich.
- PARSEY, E. W. (1886). Glenavon, King's Norton, Worc. M.A., M.B., B.C. Cantab.
- PARSON, F. J. (1865). 112, Victoria Street, Westminster.
- PARSON, H. (1869). Bondfield, Bursledon, Hants. (retired).
- PARSONS, A. C. (1892).
- PARSONS, C. O. (1882). 202, Castle Road, Roath, Cardiff.
- PARSONS, F. G. (1881). 17, Micheldever Road, Lee. F.R.C.S., Lect. on Comp. Anat. and Elem. Biol., Demonstr. of Anat. at St. Thomas's Hospital. Exam. in Anat. for F.R.C.S., and in Biology for Conjoint Board. Exam. in Anat. and Supt. of Dissections, Apoth. Hall.
- w 1882-3. 2nd Year, Prosector's Prize.
- w 1886-7. 6th Year, Grainger Testimonial Prize.
- PARSONS, W. D. (1836). 32, Huskisson Street, Liverpool.
- PARTRIDGE, W. T. (1877). 97, Albany Road, Old Kent Road.
- PATCH, H. H. L. (1885). The Fernery, Chudleigh, S. Devon.
- PATTIN, H. C. (1883). Municipal Offices, Norwich. M.A., M.B., B.C., D.P.H. Cantab. (Med. Off. Health, Norwich.

- PAUL, E. W. (1871). Hope House, West Cowes, I. W.
- PAULING, W. T. (1886). Cape Town.
- PAYNE, J. F. 78, Wimpole Street, Cavendish Square. B.A., M.D. Oxon.; B.Sc., F.R.C.P. Lond.; Phys. and Jt. Lect. on Med. St. Thos. Hosp. Lect. on Pathology and Morbid Anatomy. Radcliffe Travelling Fellow, Oxford.
- PEARCE, F. H. (1893). Northern Hosp. Liverpool. B.A. Cantab.
- PEARCE, G. H. (1886). Fisherton Asylum.
- PEARSE, A. W. (1882). Kensington Infirmary.
- PEARSON, H. L. (1883). Bay House, Holt Hill, Tranmere, Birkenhead, and Devon House, Bedford Rd., Rock Ferry, Ches.
- PEATLING, A. V. (1889). The Old Market, Wisbech, Cambs. B.A., M.B., B.C. Cantab.
- PEDLEY, R. D. (1877). 17, Railway Approach, London Bridge. F.R.C.S. Edin.; L.D.S. Demonstr. of Dent. Surg.
- PELL, W. (1884). 23, Broadway, Barking.
- PENHALL, J. T. (1852). Broadwas-on-Teme, Worc. (retired). M.D. St. And., F.R.C.S.
- PENTREATH, L. N. (1890). 15, Rosebery Terrace, Highland Road, East Southsea. M.A. Oxon.
- PERKINS, A. L. (1875). Sketty, Swansea.
- PERKINS, J. J. (1888). 41, Wimpole Street, M.A., M.B., B.C. Cantab.; M.R.C.P. Assist. Phys., Demonstr. of Morbid Anatomy, and of Morbid Histology and Bacteriology, St. Thos. Hosp. w 1888-9. 3rd Year Student, 1st Coll. Prize. H.P.
- PERKINS, J. S. (1825). 20, Wonford Road, Exeter. F.R.C.S.
- PERN, A. (1864). Botley, Southampton. F.R.C.S., D.P.H.
- PERN, E. C. (1888). Droxford, Hants.
- PERRY, E. L. (1890). Surg.-Lt. I.M.S., Bengal. w 1891-2. 2nd Year Student, 2nd Coll. Prize. w 1892-3. 3rd Year Student, 2nd Coll. Prize.
- PERSHOUSE, FRANK (1889).
- PERSHOUSE, F. (1886). Asst. Med. Off. S.-West. Fev. Hosp., Stockwell. H.P., Clin. Asst. Skin Dept.
- PETMAN, A. P. (1853).
- PETTIGREW, A. J. W. (1871). Camperdown, Victoria.
- PHELPS, A. M. (1873). 37, Compton Terrace, Highbury. M.A., M.D. Cantab.
- PHELPS, W. H. G. (1852). Weston-super-Mare. M.D. Aberd.
- PHILLIPS, A.O.H. (1871). Warwick Queensland.
- PHILLIPS, A. S. (1883). 16, St. Cuthbert's, Bedford.
- PHILLIPS, E. J. M. (1874). 33, Rodney Street, Liverpool. L.D.S., Hon. Dent. Surg. Liverp. Roy. Infir., Lect. on Dent. Surg. Univ. Coll. Liverp.
- PHILLIPS, E. V. (1881). Kibworth, Leicester. D.P.H.
- PHILLIPS, G. C. J. (1890). General Hospital, Cheltenham. M.A., M.D., B.C. Cantab.
- PHILLIPS, G. G. (1858). Tickhill, Rotherham, Yorks. 1860. 3rd Year Student, 3rd Coll. Prize. H.S.
- PHILLIPS, H. J. (1892).
- PHILLIPS, J. D. (1856). Hoxne, Scole, Suffolk.
- PHILLIPS, J. R. P. (1885). 26, High Street, Swindon.
- PHILLIPS, P. C. (1886). 5, Vine Street, Grantham. Clin. Asst. Skin Dept.
- PHILLIPS, S. C. (1882). 90, Hill Street, Peckham.
- PICKFORD, J. K. (1871). High Cliff Ter., Cleethorpes, Gt. Grimsby, Linc. w 1872. 1st Year Student, 3rd Coll. Prize.
- PIETERSEN, J. F. G. (1879). Ashwood House, Kingswinford, Staff. w 1883-4. Solly Medal and Prize. Clin. Asst. Throat Dept.
- PIGGOTT, F. C. H. (1882). 13, Orchard Gdns., Teignmouth, S. Devon. B.A., M.D., B.C. Cantab.
- PIERCE, R. W. C. (1893). M.B., B.Sc. Lond.; D.P.H. Camb. w 1893-4. 1st Year Student, 1st Entrance Sci. Scholarship, 1st Coll. Prize. s 1894. 1st Year Student, 2nd Coll. Prize. w 1894-5. 2nd Year Student, 1st Coll. Prize. w 1895-6. 3rd Year Student, 2nd Coll. Prize. s 1896. 3rd Year Student, 2nd Coll. Prize.
- PIKE, J. B. (1870). 15, High Street, Loughborough.
- PINTO, J. O. (1886). Surg.-Capt. I.M.S. Madras.
- PITTS, B. (1873). 109, Harley St., Cavendish Square. M.A., M.B., M.C. Cantab., F.R.C.S., Surgeon and Lect. on Surg. St. Thos. Hosp.; Surg. Hosp. for Children, Gt. Ormond St. Exam. in Surgery, Univ. Camb. Res. Asst. Surg., Demonstr. of Anat., H.S., R.A.

- PLANCK, C. (1888). County Asylum, Haywards Heath. M.A. Cantab.
w 1888-9. 1st Year Student, 2nd Coll. Prize.
w 1889-90. 2nd Year Student, The Peacock Scholarship.
s 1890. 2nd Year Student, 2nd Coll. Prize.
w 1890-1. 3rd Year Student, 2nd tenure of Peacock Scholarship, with 3rd Coll. Prize.
H.S., A.H.S., Clin. Asst. Ear Dept., Asst. Demonstr. of Pract. Surg.
- PLANT, C. (1882). Dalton-in-Furness, Lanc.
- PLOWMAN, S. (1879). Victoria. F.R.C.S.
- PLOWMAN, T. A. B. (1881).
- POCOCK, A. G. C. (1877). Manor View, High Road, Streatham.
- POCOCK, W. (1870). Chicago, U.S.A.
- PODMORE, R. (1870). 7, Linden Gardens, Chiswick.
- POLLARD, F. (1864). 11, St. James's Road, Upper Tooting. M.D. Lond.
1865. 1st Year Student, 2nd Coll. Prize.
1866. 2nd Year Student, 2nd Coll. Prize; Physical Society's 2nd Year's Prize.
1868. 3rd Year Student, 1st Coll. Prize; Physical Society's 3rd Year's Prize; Cheselden Medal.
Med. Registr., H.S., R.A.
- POMEROY, W. (1889). Queen Camel, Bath.
- POOLF, C. N. F. (1886). 16, Cicada Road, St. John's Hill, Wandsworth.
- POPE, E. (1833). Tring, Herts. (retired).
- PORTER, G. (1886). Frascati, St. James's Rd., Surbiton. M.D., C.M. Edin.
- POTTER, H. P. (1871). Med. Superint. Kensington Infirm. M.D. Durh., F.R.C.S., D.P.H.
s 1872. 3rd Coll. Prize.
w 1873. 2nd Year Student, 2nd Coll. Prize; Prosecutor's Prize.
w 1874. 3rd Year Student, 1st Coll. Prize; Cheselden Medal.
1875. Grainger Testimonial Prize.
Surgical Registrar, H.S., H.P., R.A.
- POTTER, J. H. (1881). Cullompton, Devon.
- POULTON, B. (1879). Adelaide, S. Australia.
- POWELL, J. J. (1887). Highworth, Wilts. M.A., M.B., B.C. Cantab.
- POWELL, J. J. (1874). Norwood Lodge, Weybridge, and Byfleet, Surrey.
- POWER, C. J. (1879). Hazelwood, Nailsworth, Glouc. M.A. Cantab., M.D. Dub.
- POWERS, R. H. (1886). 215, Ladbroke Grove.
- POYNDER, G. F. (1871). Surg.-Maj. Army.
- PRAIN, J. L. (1888). F.R.C.S.
H.S., A.H.S., Clin. Asst. Throat Dept.
- PRALL, C. B. (1887). Surg.-Capt. Bengal Army.
- PRANGLEY, H. J. (1875). Tudor House, 197, Anerley Road.
- PRICE, A. (1869). Merriebank, Moss Lane, Aintree, Liverpool
- PRICE, A. E. (1884). The Boltons, Farnborough, Hants. M.B. Lond.
Clin. Asst. Ear and Skin Depts.
- PRICE, D. (1891). Glanmorlais, Kidwelly, Carmarthenshire.
- PRICE, W. T. (1876).
- PRIESTLEY, C. E. (1870). 44, Sandgate Street, Folkestone.
- PRING, H. R. (1888). 83, Essex Road, Islington.
- PRINGLE, A. Y. (1884). 36, Cambridge Gdns., Notting Hill.
Clin. Asst. Throat Dept.
- PRIOR, J. (1890). House Surg. Dewsbury and Distr. Gen. Infirm.
- PROCTOR, S. F. (1874). Trinidad, W. Indies.
- PRONGER, C. E. (1872). East Parade, Harrogate, Yorks. F.R.C.S.
- PUGH, J. H. (1871). Chestnut Lawn, Stechford, nr. Birmingham. B.A. Cantab.
- PURKISS, A. (1875). Rosedale, Wols-ton, nr. Coventry. M.D., C.M. Aberd.
- PURVIS, G. C. (1882). M.D., C.M. Edin., B.Sc.
- PURVIS, J. P. (1860). 38, Royal Hill, Greenwich.
- PURVIS, P. (1833). 5, Lansdowne Place, Blackheath. M.D. Lond.
- PURVIS, W. P. (1887). 2, Avenue Place, Southampton. M.D., M.S., B.Sc. Lond.; F.R.C.S.
H.S., H.P., A.H.S., Clin. Asst. Throat Dept.
- PYWELL, P. D. (1893). 244, Westminster Bridge Road.
- QUAIT, A. W. (1887). St. Brannock's, Mundesley, Norfolk.
- QUILLER, C. T. (1882). St. Paul's Close, Rectory Grove, Clapham.
- RABY, J. (1862). R.A.
- RADCLIFFE, H. H. (1842). Ballarat, Victoria, Australia.
- RANSON, W. (1888). Co. Infirmary, Downpatrick, co. Down.
- RAY, W. J. O. (1889). Southery, Downham Market.
Clin. Asst. Throat Dept.

- RAYNER, H. (1861). 2, Harley St., Cavendish Square, and Upper Terrace House, Hampstead. M.D., C.M. Aberd.; M.R.C.P. Edin.: Lect. on Psychology at St. Thomas's Hosp. 1862. 1st Year Student, 1st Coll. Prize. 1863. 2nd Year Student, 1st Coll. Prize. Lecturer on Psychology at Middlesex Hospital, and Medical Superintendent Hanwell Asylum.
- READ, A. E. (1881).
- REDDY, H. L. (1876). 999, Dorchester St., Montreal, Canada. M.D., C.M.
- REDPATH, W. (1888). Geelong Mining Co., Gwanda, Rhodesia. M.B. Lond. H.S., A.H.S., Asst. Teacher Pract. Surg.
- REED, W. H. (1861). Allersleigh, Westbury, Wilts.
- REID, R. G. (1890). 176, Lambeth Road. M.B., C.M. Glasg.
- REID, R. W. 37, Albyn Place, Aberdeen. M.D., C.M. Aberd.; F.R.C.S., Prof. of Anat. Univ. Aberd. Joint Lect. on and Sen. Demonstr. of Anat., Joint Demonstr. of Morb. Anat.
- REILLY, C. C. (1880). Surg.-Maj. Army.
- RELTON, B. (1879). 50, Church St., Rugby. 1880. 2nd Entrance Science Scholarship. H.S., A.H.S., Asst. Demonstr. of Pract. Surg.
- RENDLE, G. 113, Sunderland Road, Forest Hill. Sec. Med. Sch. (1883).
- RENNY, E. G. (1886). Priory House, Wellesley Road, Colchester.
- REVELY, J. S. (1885). 25, Greek St., Stockport. M.D. Durh.
- REW, J. (1857). 31, Western Road, Bexhill-on-Sea, Sussex.
- REYNOLDS, C. A. (1895). M.B., B.Ch. Oxon.
- RICHARDS, L. W. (1891). M.B., B.S. Durh. H.P. Clin. Asst. Throat Dept.
- RICHARDSON, C. B. (1875). 2, Tisbury Road, West Brighton. M.D., C.M. Aberd. A.H.P., A.H.S.
- RICHARDSON, J. C. R. (1887). Saxmundham, Suffolk. M.A., M.B., B.C. Cantab.
- RICHARDSON, S. W. F. (1889). Charing Cross Hospital. M.B., B.S., B.Sc. Lond.; F.R.C.S. w 1889-90. 1st Year Student, The William Tite Scholarship. s 1890. 1st Year Student, 2nd Coll. Prize. w 1890-1. 2nd Year Student, The Musgrove Scholarship. w 1891-2. 3rd Year Student, 2nd Tenure of Musgrove Scholarship. s 1892. 3rd Year Student, 1st Coll. Prize. w 1892-3. 4th Year Student, The Cheselden Medal; The Treasurer's Gold Medal. H.S., A.H.S., Obst. H.P. Demonstrator of Physiology.
- RIDGE, J. J. (1863). Carlton House, Enfield, Middlesex. M.D., M.D. (State Med.), B.S., B.A., B.Sc. Lond. 1864. 1st Year Student, The William Tite Scholarship. 1865. 2nd Year of Tite Scholarship; Physical Society's 2nd Year's Prize; Prosector's Prize. 1866. The Grainger Testimonial Prize. 1868. 3rd Year Tite Scholarship; Treasurer's Gold Medal. H.S.
- RIDSDALE, A. E. (1888). Rottingdean, Sussex.
- RIGBY, C. S. A. (1878). 15, Winckley Sq., Preston, Lanc. M.B., C.M. Aberd.
- RIGBY, P. A. (1873). Bhagalpur, Bengal, India.
- RITCHIE, E. D. (1883). Chandler's Ford, Hants. M.A., M.B.B.C. Cantab. H.S., A.H.S., H.P., A.H.P.
- ROALFE-COX, W. J. (1881). The Laurels, Mortimer, Reading, Berks.
- ROBATHAN, G. B. (1866). The Grove, Risca, Newport, Mon.
- ROBERTS, E. A. (1884). 19, Cliveden Place, Eaton Square. M.D. Lond.
- ROBERTS, O. (1874). 32, Craven Park Road, Harlesden.
- ROBERTSON, C. (1883). Alicedale, Cape Colony. J.P.
- ROBINSON, A. C. (1892). w 1896-7. 5th Year Student, The Cheselden Medal. A.H.S.
- ROBINSON, G. W. (1873). Surg.-Maj. Army.
- ROBINSON, H. B. (1879). 1, Upper Wimpole Street. M.D., M.S. Lond., F.R.C.S. Assistant Surgeon, Surgeon for Diseases of the Throat, and Dem. of Anatomy at St. Thomas's Hospital. Assistant Surgeon to the East London Hospital for Children. Shadwell. s 1881. 2nd Year Student, 1st Coll. Prize. Resident Assistant Surgeon, H.P., H.S., A.H.S.
- ROBINSON, J. C. R. (1889). Harleston, Norfolk.
- ROBINSON, M. A. (1869). Plympton House, Honiton, Devon.
- ROBINSON, S. C. B. (1874). Surg.-Maj. Army.
- ROBINSON, S. R. (1836). 68, Fenwick St., Geelong, Victoria, Australia.
- ROBINSON, W. H. (1882). 14, Upper Queen's Terrace, Fleetwood, Lanc.
- ROBSON, C. (1882).
- ROBSON, R. B. (1887). 20, Bondgate Without, Alnwick, Northld. M.B. Durh.

- ROBSON, W. W. C. (1878). Walkeringham, Gainsboro', Linc.
- ROCK, C. H. (1887). Surg. R.N. 65, Granville Park, Lewisham.
- ROCKLIFFE, W. C. (1871). 17, Charlotte Street, Hull. M.A., M.B. Cantab.; M.D. Dub.
- ROE, A. D. (1880). 47, West Hill, Wandsworth. B.A., M.B. Cantab. w 1880-1. 3rd Year Student, 2nd Coll. Prize.
- ROE, E. A. H. (1889). Surg.-Lt.-Col. Army (retired).
- ROLL, G. W. (1884). 6, Gloucester Rd., South Kensington. B.A., M.B., B.C. Cantab. F.R.C.S. Ophth. H.S.
- ROMER, H. (1884). 68, Killieser Avenue, Streatham Hill. M.A., M.B., B.Ch. Oxon.
- RONALD, A. E. (1886). Napier, New Zealand. B.A., M.B., B.C. Cantab.
- ROPER, H. (1890). Lynton, North Devon. B.A., M.B., B.C. Cantab.
- RORIE, J. (1846). Dep. - Insp. - Gen. R.N. (retired).
- ROSS, E. H. (1892).
- ROSS, H. C. (1892).
- ROSSER, W. (1865). Glenalmond, Wellesley Road, Croydon, Surrey. M.D. Aberd. H.S.
- ROSSITER, G. F. (1870). Cairo Lodge, Weston-super-Mare. M.B. Lond. 1871. 1st Year Student, 1st Coll. Prize. w 1872. 2nd Year Student, 2nd Coll. Prize. s 1872. 1st Coll. Prize. w 1873. 3rd Year Student, 3rd Coll. Prize; Cheselden Medal; Treasurer's Gold Medal. H.P., H.S., R.A.
- ROSTANT, A. A. (1887). Port of Spain, Trinidad.
- ROTH, W. E. (1884). Normanton, North Queensland.
- ROTHERHAM, A. (1892). Asst. Med. Off. Lond. Co. Asyl., Cane Hill, Purley, Surrey. M.A., M.B., B.C. Cantab.
- ROUILLARD, J. A. A. (1891). Lady-smith, Natal. Clin. Asst. Throat Dept.
- ROUILLARD, L. A. J. (1886). Durban, Natal. M.B. Camb.; F.R.C.S. H.S., A.H.S.
- ROUND, J. C. (1884). Purbrook, 19, Crescent Wood Road, Sydenham Hill. L.D.S.
- ROUSE, R. E. (1878). 42, Hove Park Villas, West Brighton (summer); and Winter Palace, Monte Carlo (winter). M.D. Lond. s 1880. 2nd Year Student, 3rd Coll. Prize. H.P., R.A.
- ROWE, W. J. V. (1875).
- RUDALL, J. F. (1890). 121, Collins Street East, Melbourne. M.B., B.S. Melb. Ophth. H.S.
- RUDALL, J. T. (1851). 121, Collins Street East, Melbourne, Victoria, Australia. F.R.C.S.
- RUGG, J. F. (1873). 25, High St., Hastings.
- RUSSELL, A. E. (1889). Melton House, 43, Manor Park, Lee. M.D., B.S. Lond.; Med. Regis. and Demonstrator of Practical Medicine. w 1889-90. 1st Year Student, 2nd Entrance Science Scholarship; 1st Coll. Prize. s 1890. 1st Year Student, 1st Coll. Prize. w 1890-1. 2nd Year Student, Half 1st and 2nd Coll. Prizes. w 1891-2. 3rd Year Student, 1st. Coll. Prize. H.P., H.S., A.H.S., Clin. Asst. Skin Dept. Demonstrator of Physiology.
- RUSSELL, J. (1890). Brunswick St., Batley, Yorks. M.A. Aberd., M.D., C.M. Edin.
- RUSSELL, J. S. R. (1886). 4, Queen Anne St., Cavendish Square. M.D. C.M. Edin.; F.R.C.P. Lond.
- RUTHERFOORD, H. T. (1886). Salisbury House, Taunton. M.A., M.D. Cantab.
- RYGATE, R. (1877). Wardington, Banbury, Oxon.
- SALISBURY, C. R. (1887). Stanningley, Leeds.
- SAMS, J. S. (1854).
- SANDERSON, A. R. P. (1891). Eureka City, Barberton, Transvaal.
- SANDWICH, F. M. (1872). Cairo, Egypt, and Savile Club, London. M.D. Durh.; M.R.C.P. Lond.; Phys. and Teacher of Clin. Med. Kasr el Aini Hosp., Cairo; Exam. in Med. and Path. at Med. Sch. H.P., R.A.
- SANEYOSHI, Y. (1879). Tokio, Japan. F.R.C.S. w 1881-2. 3rd Year Student, 1st Coll. Prize. H.P., A.H.P., A.H.S.
- SANGUINETTI, H. H. (1895). B.A. Oxon. H.S., A.H.S.
- SANKEY, E. H. O. (1891). Boreatton Park, Baschurch, Salop. M.A., M.B., B.C. Cantab.
- SANSOM, H. A. (1882). The Glen, 127, West End Lane, West Hampstead. M.D. Lond. A.H.P., Clin. Asst. Throat and Skin Depts.
- SAPARA, O. (1887). Lagos, West Africa.
- SARGENT, P. W. G. (1895). B.A., M.B., B.C. Cantab. w 1895-6. 3rd Year Student, University Scholarship.

- SARKIES, S. C. (1877). Surg.-Maj. Madras Army.
- SAUNDERS, C. E. (1861). Med. Superintendent. Sussex Co. Asyl., Hayward's Heath. M.D., C.M. Aberd.; M.R.C.P., D.P.H. Surg. Regist., R.A.
- SAUNDERS, E. A. (1889). Milton Heath, Dorking. M.A., M.B., B.Ch. Oxon.
w 1892-3. 4th Year Student, The Mead Medal.
H.P. Obst. H.P. Ophth. H.S.
- SAUNDERS, Sir Edwin. (1836). Fair-lawn, Wimbledon Common (retired). F.R.C.S., Surg.-Dent. to H.M. the Queen and T.R.H. the Prince and Princess of Wales, also to his late R.H. Prince Consort.
Lect. on Anat. and Dis. of the Teeth,
- SAUNDERS, F. E. (1886). 154, High Street, Battersea.
- SAUNDERS, H. (1882). The Priory, Deddington, Oxon. B.A. Cantab.
- SAUNDERS, H. W. (1866). 82, Pembroke Road, Clifton, Bristol, M.B. Lond., F.R.C.S.
1867. 1st Year Student, 2nd Coll. Prize.
1868. Prosector's Prize.
1869. 3rd Year Student, 1st. Coll. Prize; Treasurer's Gold Medal; Physical Society's 3rd Year's Prize.
- SAUNDERS, W. S. (1843). 13, Queen Street, Cheapside, and 58, Onslow Gdns., South Kensington. M.D. Castleton U.S.
1845. Medicine, Prize; Midwifery, Prize; Clinical Medicine, Prize.
- SAVILL, T. D. (1875). 60, Upper Berkeley St., Portman Sq. M.D. Lond., D.P.H. Cantab.
w 1875-6. 2nd Entrance Science Scholarship; 1st Year Student, The William Tite Scholarship.
s 1876. 3rd Coll. Prize.
s 1877. 2nd Year Student, 2nd Coll. Prize. H.P., A.H.P., R.A.
- SAYRES, A. W. F. (1885). Woodford, Essex. M.D. Brux. Clin. Asst. Ear. Dept.
- SAYERS, M. J. H. (1889). H.S. Royal Berks Hospital.
- SCATCHARD, J. P. (1892). Tadcaster, York. M.B., B.S. Lond.
w 1892-3. 1st Year Student, 1st Coll. Prize.
s 1893. 1st Year Student, 2nd Coll. Prize.
w 1893-4. 2nd Year Student, 1st Coll. Prize.
w 1895-6. 4th Year Student, The Mead Medal, Treasurer's Gold Medal.
H.P. Junr. Obst. H.P.
- SCHILLING, G. (1885). Haverthwaite, Ulverston.
- SCOTT, E. (1870). Perth, W. Australia. M.D. Durh. D.P.H.
- SCOTT, E. H. (1892).
- SCOTT, H. H. (1893). 38, Longton Grove, Sydenham. H.P.
- SCOTT, J. R. (1885). Market Overton, Oakham, Rutland.
- SCOTT, J. W. (1875). 11, St. George's Parade, Wolverhampton.
- SCUDAMORE, L. (1886). 23, Granville Park, Blackheath. Clin. Asst. Skin. Dept.
- SCUTT, T. H. (1879). Colne Lodge, Staines, Middlesex.
w 1882-3. 3rd Year Student, 1st Coll. Prize. A.H.P.
- SEAR, J. T. (1888). 29, Tooting Bec Road.
- SEATON, E. (1865). The Limes, 56, North Side, Clapham Common. M.D., F.R.C.P. Lect. on Pub. Health St. Thos. Hosp.; Exam. in Pub. Health and State Med. R.C.S. Eng. and Univ. Lond.
- SECCOMBE, P. J. A. (1890). 45, Madeley Rd., Ealing. M.A., M.B., B.C. Cantab. H.P., Clin. Asst. Throat and Electr. Depts.
- SEDDON, H. B. (1883). 40, Chepstow Rd., Newport, Mon. A.H.P., Clin. Asst. Throat and Ear Dept.
- SEDGWICK, H. R. (1892). Onslow Villa, Richmond Road, Kingston-on-Thames. M.A., M.B., B.C. Cantab. Clin. Asst. Skin Dept.
- SEDGWICK, J. (1853). Boroughbridge, Yorks. M.D. St. And. J.P.
- SEDGWICK, L. W. (1847). 48, Gloucester Terrace, Hyde Park. M.D. St. And.
1848. Descriptive and Surgical Anatomy, Prize;
Physiology and Anatomy, Prize;
Midwifery, Prize;
Surgery, Prize.
1849. Physiology, 1st Prize;
Midwifery, 1st Prize;
Surgery, Prize;
Medicine, 1st Prize;
General Proficiency, Treasurer's Medal.
- SELIGMANN, C. G. (1892).
w 1892-3. 1st Year Student, 2nd Entrance Science Scholarship; Half 2nd Coll. Prize.
w 1896-7. The Bristowe Medal.
H.P. Clin. Asst. Electrical Dept.
- SEMON, Sir F. 39, Wimpole Street, Cavendish Square. M.D. Berlin; F.R.C.P. Lond. Late Phys. for Dis. of Throat St. Thos. Hosp.
- SENIOR, E. W. (1886). Hamilton Villa, Herne Bay.

- SEON, G. E. (1877). Dellwood, Liebenwood Road, Reading.
- SERGEANT, E. (1867). County Offices, Preston, Lanc. L.S.Sc. Durh.
1870. 3rd Year Student, 3rd Coll. Prize : Cheselden Medal.
H.S., R.A.
- SERS, C. H. (1868). 130, Queen's Rd., Peckham.
- SHACKEL, G. A. (1880). 8, Corve St., Ludlow, Salop.
- SHARKEY, S. J. (1873). 22, Harley Street, Cavendish Square. M.A., M.D. Oxon.; F.R.C.P.; Gulst. Lect. 1886. Phys., Jt. Lect. on Med. St. Thos. Hosp.; Late Exam. in Path. Univ. Oxf. Exam. in Medl. Anat. and Principles and Pract. of Med. R.C.P. Lond.
Lect. on Pathology, Demonstrator of Morbid Anatomy, and Res. Asst. Phys.; Radcliffe Travelling Fellow, Univ. Oxf.
- SHARMAN, M. (1885). Rickmansworth, Herts. M.B., C.M. Glasg. D.P.H.
- SHARPLES, M. W. (1896). 57, Battersea Rise. M.B., C.M. Aberd.
- SHATTOCK, S. G. 4, Crescent Road, Wimbledon. F.R.C.S. Curator of Museum and Jt. Lect. on Pathology. Path. Curator, Royal Coll. Surg.
- SHAW, J. (1874). 32, New Cavendish St., Cavendish Square. M.D. Lond.
w 1874-5. 1st Year Student, 1st Coll. Prize.
s 1875. 1st Coll. Prize.
w 1875-6. 2nd Year Student, 1st Coll. Prize.
H.P., A.H.P., R.A.
- SHAW, W. H. C. (1885). The Grange, Chew Magna, Somerset. M.A., M.B., B.C. Cantab.
- SHEA, H. F. (1892). M.B., B.S. Durh.
H.P.
- SHEARER, D. F. (1886). B.A., M.B., B.Ch. Oxon.; F.R.C.S.
1888. 2nd Year Student, Half 2nd Coll. Prize.
H.P., H.S., A.H.S., Clin. Asst. Throat Dept.
- SHEPHEARD, H. (1887).
- SHEPHEARD, J. (1887). Cromer Rd., North Walsham, Norfolk. B.A. Cantab.
- SHEPHEARD, P. C. (1859). Aylsham, Norfolk.
- SHEPHERD, H. B. (1882). Peveril House, Castleton, Sheffield.
- SHEPHERD, F. J. (1873). 152, Mansfield St., Montreal. M.D. McGill; Professor of Anatomy, McGill University; Senior Surgeon Montreal General Hospital.
- SHEPHERD, T. W. (1873). Castle St. House, Launceston, Cornwall.
- SHEPPARD, W. J. (1878). 211, Upper Richmond Road, Putney. M.D., M.S. Durh.
w 1880-1. 3rd Year Student, 3rd Coll. Prize.
w 1881-2. The Treasurer's Gold Medal.
R.A., H.P., A.H.P., A.H.S.
- SHERRINGTON, C. S. (1876). M.A., M.D., F.R.S. Prof. of Physiology, University College, Liverpool. Fellow of Gonville and Caius College, Cambridge. Physiological Society Hon. Sec.
w 1882-3. 6th Year, Grainger Testimonial Prize.
Lecturer on Physiology.
- SHIRRES, G. (1880). Melbourne, Victoria, Australia. M.D., C.M., D.P.H. Aberd.
- SHIRTLIFF, E. D. (1882). Holmwood, Cowleigh Road, Malvern, Worc.
w 1882-3. 2nd Entrance Science Scholarship.
- SIDDALI, G. O. (1853). Late R.N.
- SIDDALL, J. B. (1860). (Travelling.) M.D., C.M. Aberd., D.P.H.
- SIKES, A. W. (1892). St. Thomas's Hosp. M.B., B.S., B.Sc. Lond. Demonstrator of Physiology.
w 1892-3. 1st Year Student, 1st Entrance Science Scholarship, the Wm. Tite Scholarship.
s 1893. 1st Year Student. 1st Coll. Prize.
w 1893-4. 2nd Year Student, the Peacock Scholarship.
w 1894-5. 3rd Year Student, 1st Coll. Prize, with 2nd tenure of Peacock Scholarship.
s 1895. 3rd Year Student, 1st Coll. Prize.
w 1895-6. 4th Year Student, the Mead Medal.
w 1896-7. 5th Year Student, the Treasurer's Gold Medal.
w 1897-8. The Bristowe Medal.
H.P.
- SIMMONS, E. L. (1856). St. Kilda, Victoria, Australia.
- SIMMONDS, H. M. (1847). 66, Camberwell Road.
- SIMON, Sir John, K.C.B. (1833). 40, Kensington Sq. F.R.C.S. (Hon.), F.R.S., Hon. M.D. et Chir. Munich, Hon. M.D. Dub., Hon. D.C.L. Oxon., Hon. LL.D. Cantab. et Edin. Cons. Surg. (formerly Surg. and Lect. on Path.) St. Thos. Hosp.
- SIMON, M. F. (1865). Singapore, Straits Settlements. M.D. St. And.; L.D.S. Edin.
1866. 1st Year Student, 1st Coll. Prize.
1869. 3rd Year Student, 3rd Coll. Prize; Prosector's Prize; Prize and Hon. Cert. for Surgery and Surgical Anatomy.
- SIMPSON, C. B. (1889).
- SIMPSON, H. (1889). B.A., M.B., B.C. Cantab.
w 1889-90. 3rd Year Student, 3rd Coll. Prize.
A.H.S., Clin. Asst. Ear Dept.
- SIMS, D. (1888).

- SIMS, G. S. (1880). The Hollies, Green Hill, Derby.
s 1881. 1st Year Student, 3rd Coll. Prize.
- SIMS, J. H. (1886).
- SIMSON, F. T. (1897). Craven House, Northumberland Avenue.
- SINCLAIR, D. (1887). 6, East Park Terrace, Maryhill, Glasgow. M.B., C.M. Glasgow.
- SINGH, B. J. (1888). Surg.-Capt. Bengal Army.
- SISSONS, W. H. (1857). 3, Priestgate, Barton-on-Humber, Linc. J.P.
1858. Matriculation Examination-Physics, &c., Prize.
1859. Clinical Medicine, Prize ; Physical Society's Essay, Prize.
1860. 3rd Year Student, 2nd Coll. Prize ; Physical Society's Prize.
H.S.
- SKARDON, T. G. (1854). Brig.-Surg. I.M.S., Bengal. (Retired).
- SLATER, J. S. (1867). Evesham, Worc. J.P.
1868. 1st Year Student, 1st Coll. Prize.
1869. Physical Society's 2nd Year's Prize.
1870. 3rd Year Student, 2nd Coll. Prize ; Treasurer's Gold Medal.
H.P., R.A.
- SLAUGHTER, C. H. (1853). Insp.-Gen. R.N. (retired).
- SLAUGHTER, J. E. (1868).
- SLAUGHTER, W. B. (1866). Brig.-Surg.-Lt.-Col. Army.
- SLIPPER, T. (1831). 30, St. Saviour's Road, W. Croydon, Surrey.
- SLOCOCK, R. (1889). Portsmouth Royal Hospital.
- SMART, W. H. (1882). Polesworth, Tamworth, Warwk. M.A., M.B. Cantab.
- SMITH, A. (1878). Bank House, 54, Stockwell Green.
- SMITH, C. C. (1873). Redditch, Worcester. B.A., M.B. Cantab.
H.S., R.A.
- SMITH, C. J. (1856). 2, Medina Villas, Brighton.
- SMITH, E. (1888). Wallace Lodge, Balham High Road, Upper Tooting. M.D. Lond.
w 1888-9. 1st Year Student, 2nd Entrance Science Scholarship ;
The William Tite Scholarship.
s 1889. 1st Year Student, 1st Coll. Prize.
w 1889-90. 2nd Year Student, 1st Coll. Prize.
w 1890-1. 3rd Year Student, 2nd Coll. Prize.
s 1891. 3rd Year Student, 2nd Coll. Prize ; Treasurer's Gold Medal.
H.S., A.H.S.
- SMITH, E. L. T. (1873). 138, High Street, Wandsworth.
- SMITH, F. J. P. (1881). 103, East St., Walworth.
- SMITH, F. W. (1863). 40, Newington Causeway.
- SMITH, H. (1851). Belmont, Ryde, I.W. (retired).
- SMITH H. (1857). Blackrod, Chorley Lanc.
- SMITH, H. E. (1887). Gleneagle House, Streatham. M.A., M.B., B.C. Cantab.
- SMITH, J. 23, Park Road, Plumstead, Kent.
- SMITH, J. (1892). 18, Putney Hill. M.A., M.B., B.C. Cantab. ; F.R.C.S. H.S., A.H.S.
- SMITH, J. B. (1881). 4, Holmdene Avenue, Dulwich.
- SMITH, J. H. (1891). Bank House, 54, Stockwell Green.
- SMITH, R. P. (1874). Res. Phys. and Med. Superint. Bethlem Royal Hosp. M.D., B.S., F.R.C.P.
s 1876. 2nd Year Student, 2nd Coll. Prize. Res. Asst. Phys., H.P., A.H.P., H.S. A.H.S., Demonstr. of Pract. Phys.
- SMITH, S. L. (1870). 25, Argyle Square, King's Cross.
- SMITH, W. H. (1854). Cranmore, Royal St. West, Sandown, Isle of Wight.
- SMITH, W. H. (1877). Weston Lodge, Weston, Bath.
- SMYTH, H. J. (1882). South Molton, N. Devon.
w 1882-3. 1st Year Student, 3rd Coll. Prize.
s 1883. 1st Year Student, 1st Coll. Prize.
w 1883-4. 2nd Year Student, 1st Coll. Prize.
s 1884. 2nd Year Student, 2nd Coll. Prize.
w 1885-6. 4th Year Student, Treasurer's Gold Medal.
H.P., R.A., Clin. Asst. Skin Dept.
- SNATH, F. (1861). 5, Pump Square, Boston, Linc. M.D., C.M. Aberd.
- SNOAD, E. H. (1849). Aylestone Park, Leicester.
- SOLLY, E. (1882). Strathlea, Coldbath Road, Harrogate. M.B. Lond. ; F.R.C.S. ; D.P.H.
w 1883-4. 2nd Year Student, 2nd Coll. Prize.
w 1885-6. Solly Medal and Prize.
Surg. Regist., A.H.S., R. A., Clin. Asst, Skin and Ear Depts.
- SOLLY, R. V. (1883). 40, West Southernhay, Exeter. M.D., B.S. Lond. ; F.R.C.S.
w 1884-5. 2nd Year Student, Half 2nd Coll. Prize.
H.S., A.H.S., Clin. Asst. Skin Dept.
- SOLLY, S. E. (1863). Colorado Springs, Colorado, U.S.A.
Med. Registr.
- SOMERS, C. D. (1893). Deodara, Surbiton. B.A. Cantab.
- SOUTH, R. E. E. (1882). Church Close, Boston, Linc.

- SOUTHERN, F. G. (1881). Pant-y-r-odin, Llandeibie, S. Wales.
- SOUTHERN, J. A. (1878). Friar Gate, Derby.
- SOWERBY, T. (1848). Welshpool, Montgomery.
- SPARKE, G. W. (1850). Mansfield, Notts.
- SPAULL, P. W. (1888). 1, Stanwick Road, West Kensington.
- SPEED, H. A. (1871).
- SPENCER, M. H. (1885). 95, St. Mark's Road, North Kensington. M.A., M.D., B.C. Cantab. H.P., Ophth. Asst.
- SPITTA, E. J. Ivy House, Clapham Common.
- SPRAKELING, R. J. (1854). 58, Merton Rd., Bootle, Liverpool. J.P. 1856. Clin. Med. Prize.
- SQUANCE, T. C. (1880). 15, Grange Crescent, Sunderland. M.D., M.S. Durh.; L.S.Sc. Phys. and Path. Sunderland Infirm.
- STABB, A. F. (1885). 34, Welbeck St. M.B., B.C. Cantab. M.R.C.P. Lond. Asst. Obst. Phys. St. George's Hospital; Univ. Lect. on Midwifery, Cambridge.
w 1885-6. 1st Year Student, 1st Entrance Science Scholarship;
The William Tite Scholarship.
s 1886. 1st Year Student, 2nd Coll. Prize.
w 1886-7. 2nd Year Student, The Musgrove Scholarship.
s 1887. 2nd Year Student, 1st Coll. Prize.
w 1887-8. 3rd Year Student, 2nd Tenure of Musgrove Scholarship, with 1st Coll. Prize.
w 1888-9. Treasurer's Gold Medal. Obst. Tutor and Registrar. H.S., A.H.S.
- STABB, E. C. (1882). 57, Queen Anne Street. F.R.C.S. Jun. Dem. of Anat. St. Thomas's Hospital.
w 183-4. 2nd Year Student, Prosector's Prize.
s 1884. 2nd Year Student, 1st Coll. Prize. Resident Assistant Surgeon, Surg. Regist., Demonstr. of Pract. Surg., Chief Asst. Throat Dept. H.S., A.H.S., R.A., Clin. Asst. Throat and Ear Depts.
- STABB, F. A. (1885). St. John's, Newfoundland.
- STABB, W. W. (1888). Croft Lodge, Torquay. B.A., M.D., B.C. Cantab. w 1889-90. 4th Year Student, The Mead Medal. H.P.
- STABLEFORD, F. B. G. (1893). 114, Edmund Street, Birmingham.
- STACY, J. H. (1883). 39, Exchange Street, Norwich.
- STADDON, H. E. (1887). Surg.-Lt. Army.
- STADDON, J. R. (1880). 6, Silent St., Ipswich. A.H.P.
- STADDON, W. J. (1881). The Priory, St. Nicholas, Ipswich.
- STAINER, E. (1893). South Parkes Road, Oxford. B.A., M.B., B.Ch. Oxon. H.P. Clin. Asst. Skin and Elect. Depts.
- STALLARD, H. (1889). Stow-on-the-Wold. B.A. Cantab.
- STANFORTH, J. W. (1887). Hinderwell, Yorks.
- STARES, C. L. B. (1888).
- STARK, M. D. (1875). 6, Broad St., Oxford. M.D., C.M. Trin. Coll. Toronto.
- STARTIN, J. (1870). 15, Harley St., Cavendish Square.
- STATHAM, R. W. (1878). The Hall, Cheddar, Somerset.
- STAVELEY, W. H. C. (1881). 13, South Eaton Place. F.R.C.S. H.S., A.H.S., A.H.P., Clin. Asst. Ear Dept.
- STEDMAN, S. B. (1889).
- STEEVES, G. W. (1880). 53, Parkfield Rd., Princes Pk., Liverpool. B.A. New Brunswick, M.D. Brux.
- STEPHENS, W. J. (1886). The Dispensary, Nottingham.
- STEVENS, A. E. (1892). 5, Culmington Road, Ealing. M.B. Durh.
- STEVENS, B. C. (1893). West View, Seaford.
- STEVENSON, E. S. (1871). Strathallan House, Rondebosch, Cape Colony. M.D. Brux.; F.R.C.S. Edin.
- STEWART, C. Royal College of Surgeons, Lincoln's Inn Fields. Prof. of Comp. Anat. and Phys., and Conserv. of Museum R.C.S. Eng. F.R.S. Curator of Museum and Lecturer on Physiology and Comparative Anatomy.
- STEWART, C. H. (1888). Witheridge, North Devon.
- STILES, H. T. (1851). Spalding, Linc. M.D. St. And.; J.P.
- STILWELL, G. R. F. (1886). 14, Southend Rd., Beckenham, Kent. M.B. Lond. H.P.
- STOCKS, F. (1863). 421, Wandsworth Road. R.A.
- STOKER, G. (1880). 14, Hertford St., Mayfair, and Dunloe Castle, Killarney, Co. Kerry. M.R.C.P.I., J.P.
- STOKES, W. (1856). Buckingham House, 51, Foster Hill Road, Bedford (retired).
- STOKES, W. (1888). Pilgrims' Rest, Lydenburg, Transvaal. M.B. Lond.

- STONE, F. W. S. (1878). 50, Kempshott Rd., Streatham Common. H.P.
- STONE, W. G. (1889). 93, Denmark Hill. M.A., M.B., B.Ch. Oxon. F.R.C.S.
H.S., A.H.S. Clin. Asst. Ear and Elect. Depts.
- STRANGE, R. G. (1890). 2, Belsize Avenue, Hampstead.
H.S., A.H.S. Clin. Asst. Ear Dept.
- STRANGE, W. H. (1861). 2, Belsize Av., Hampstead, and 5, Grosvenor St. M.D., C.M. Aberd.
- STRIDE, J. (1861). Waratah, Newcastle, New South Wales.
- STRONG, G. The Chase, Ross, Herefordsh. M.D. Edin.
- STUART, J. B. Mere Oaks, Standish, Wigan. F.R.C.S. Edin., J.P.
- STUART, T. E. (1882). 30, West Street, Harwich, Essex.
- STURDEE, F. H. (1891). 19, Highbury Place.
- SUGDEN, E. S. (1880). 77, Walton Vale, Aintree, Liverpool. M.D. Durh.
- SULLIVAN, E. H. C. (1880). 53, Bath Street, St. Helier, Jersey.
- SUMMERHAYES, H. (1860). Moorcroft, Parkstone, Dorset. B.A. Lond.
1861. Matriculation Examination—Classics and Mathematics, President's Prize; Modern Languages, &c., Coll. Prize; Physics and Natural History, Coll. Prize;
The William Tite Scholarship.
1862. 2nd Year Tite's Scholarship.
1863. 3rd Year Tite's Scholarship; Treasurer's Gold Medal.
H.S., R.A., Surg. Registrar.
- SUMMERHAYES, W. (1855). Brightling Mount, Burwash, Sussex. M.D. Durh.
1856. Matriculation Examination—Modern Languages. Prize.
- SUTCLIFF, E. (1860). Gt. Torrington, Devon. M.D., C.M. Aberd. Mem. Gen. Counc. Univ. Aberd.
1861. 1st Year, 3rd Coll. Prize;
1863. 3rd Year Student, 3rd Coll. Prize.
- SUTCLIFF, E. H. (1891). Gt. Torrington, Devon. M.B., B.S. Durh.
- SUTCLIFF, J. H. (1851). Fairfield House, Ripley, Surrey (retired).
- SUTCLIFFE, J. (1867). Ashbourne House, 625, Wandsworth Rd.
1869. Prosector's Prize.
- SUTCLIFFE, W. G. (1888). 50, Clifton Terrace, Cliftonville, Margate.
w 1888-9. 1st Year Student, 1st Coll. Prize.
s 1889. 1st Year Student, 2nd Coll. Prize.
w 1889-90. 2nd Year Student, 2nd Coll. Prize.
w 1891-2. 4th Year Student, The Cheselden Medal.
H.S., A.H.S.
- SUTTER, R. R. (1892). Poplar and Stepney Sick Asylum, Bromley. M.B., C.M. Aberd.
- SUTTON, Rev. F. W. (1875). Cala, Cape Colony.
- SUTTON, H. M. (1878). Bagdad, Turkey-in-Asia.
- SUTTON, S. W. (1875). Quetta, India. M.D., B.S. Lond.
H.P., A.H.S., A.H.P., R.A.
- SUZUKI, S. (1886). Tokio, Japan.
- SWALE, H. (1875). 23, Upper Richmond Road, Putney. M.B. Lond.
A.H.P., A.H.S.
- SWALLOW, A. J. (1885). 5, Mount Edgcumbe Gdns., Clapham Rise. M.B., B.S. Durh.
Clin Asst. Skin Dept.
- SWALLOW, J. D. (1859). Clifton Lodge, Clarence Rd., Clapham Park. M.D. St. And.
- SWEET, J. L. (1838). Tenbury, Worc.
- SWEETAPPLE, H. A. (1888). Adelaide, S. Australia. M.D., B.S. Durh.
- SWINDELLS, E. (1886). Torcross, S. Devon.
- SWINHOE, A. C. (1890). Park House, New Swindon, Wilts.
- SWINHOE, G. R. (1887). New Swindon, Wilts.
- SYMONS, R. FOX (1888). 34, Christchurch Road, Streatham
H.S., A.H.S.
- TAKAKI, K. (1875). Tokio, Japan. F.R.C.S., Director-General of the Medical Department Imperial Japanese Navy, Surgeon to the Tokio General Hospital.
w 1875-6. 1st Year Student, 3rd Coll. Prize.
s 1876. 2nd Coll. Prize.
w 1876-7. 2nd Year Student, 1st Coll. Prize.
s 1877. 2nd Year Student, 3rd Coll. Prize.
w 1877-8. 3rd Year Student, 2nd Coll. Prize.
w 1878-9. 4th Year Student;
The Cheselden Medal;
The Treasurer's Gold Medal.
H.S., R.A., A.H.P.
- TAKAYASU, M. (1890). Shichome, Osaka, Japan.
w 1892-3. 2nd Year Student, The Musgrove Scholarship.
s 1893. 2nd Year Student, $\frac{1}{2}$ 1st and 2nd Coll. Prizes.
w 1893-4. 3rd Year Student, 2nd tenure of Musgrove Scholarship.
- TANNER, H. (1895). Hartington House, Devonshire Road, South Lambeth. F.R.C.S.
- TARZEWELL, J. (1843). Sturminster Newton, Blandford, Dorset. (retired).
- TATE, W. W. H. 57, Queen Anne St., Cavendish Square. M.D. Lond., M.R.C.P. Asst. Obst. Phys.
Obst. Tutor and Registrar St. Thos. Hosp.

- TATHAM, E. (1873).
- TAYLOR, D. (1878). Hyla Kandy, Cachar, Bengal. M.D., R.U.I.
- TAYLOR, F. P. (1865). St. John, New Brunswick, Canada.
- TAYLOR, G. E. O. (1891).
H.S., A.H.S., Clin. Asst. Skin Dept.
- TAYLOR, S. (1869). 16, Seymour St., Portman Square. M.D., C.M. Aberd., M.R.C.P. Assistant Physician West London Hospital.
Demonstrator of Anatomy.
- TAYLOR, S. J. (1874). 44, Prince of Wales Road, Norwich. M.B., C.M. Edin.
w 1875-6. 2nd Year Student, The Musgrove Scholarship.
w 1876-7. 3rd Year Student, 2nd Year Musgrove Scholarship, and 1st Coll. Prize.
w 1877-8. The Mead Medal;
The Treasurer's Gold Medal.
- TEALE, M. A. (1889). 38, Cookridge Street, Leeds.
1894. Solly Medal and Prize.
- TEBB, W. S. (1883). Charlcombe, Boscombe Hill, Bournemouth. M.A., M.D. Cantab., D.P.H.
Clin. Asst. Throat Dept.
- TEBBS, L. V. (1887). Christchurch, Hants.
- TERRY, J. (1884). The Hall, Daventry, Northants.
- THOMAS, D. E. (1873). Eastfields, Chepstow Road, Newport, Mon.
- THOMAS, J. T. (1882). Penveen, Camborne, Cornwall.
- THOMAS, J. W. (1876). The Wern, Neath, Glamorg.
- THOMAS, P. C. (1884). Cape Town.
- THOMAS, R. W. (1867). Temple House, Rye Lane, Peckham.
- THOMPSON, C. H. (1879). Jun. Constitutional Club, Piccadilly. M.A., M.D. Dub., M.R.C.P., D.P.H.
- THOMPSON, F. H. (1868). Cleobury Mortimer, Salop.
1870. Prosector's Prize.
- THOMPSON, G. W. (1890). 6, West Street, Scarborough. B.A., M.B., B.C. Cantab.
H.P., H.S.
- THOMSON, G. J. C. (1873). 111, Sinclair Road, West Kensington Park. M.D. Durh.
- THORMAN, W. H. (1891). Royal United Hosp., Bath. B.A. Cantab.
Clin. Asst. Skin Dept.
- THORNELLY, W. (1891). 60, Herne Hill. B.A., M.B., B.C. Cantab.
Clin. Asst. Throat Dept.
- THORNTON, A. C. (1885). 11, Argyle Road, Castle Hill, Ealing.
- THORNTON, F. B. (1891). Osmaston Road, Derby. M.B., B.S. Lond.
w 1894-5. 4th Year Student, The Mead Medal.
H.P.
- THORP, A. E. (1889). 449, Lordship Lane, Dulwich.
- THUDICHUM, J. L. W. (1878). 11, Pembroke Gdns., Kensington. M.D. Giessen, F.R.C.P.
Lect. on Path. Chem.
- THURNAM, W. R. (1886). City and County Asylum, Fishponds, Bristol. M.B., B.S. Durh.
- THURNELL, H. L. (1889). 6, Woodville, Gravesend. M.A. Cantab.
- THURSTAN, E. P. (1874). Perth, Western Australia. M.D. Cantab.
- THURSTON, E. O. (1890). 27, Pantton St., Haymarket. M.B., B.S. Lond. F.R.C.S. Surgical Registrar.
s 1892. 2nd Year Student, Half 1st and 2nd Coll. Prizes.
w 1892-3. 3rd Year Student, Half 3rd Coll. Prize.
w 1893-4. 4th Year Student, Cheselden Medal.
H.S., A.H.S., Clin. Asst., Ear Dept.
- THWAITES, G. B. (1893).
- TIMOTHY, P. V. (1848).
1851. Practical Midwifery, Prize.
- TIMS, H. W. M. (1889). 59, St. George's Square, Pimlico. M.D., C.M. Edin.
Lect. on Biol. and Comp. Anat. Westm. Hosp. Med. Sch.
- TINLEY, W. E. F. (1891). Thorsgrif, Whitby, Yorks. M.D., B.S. Durh.
w 1891-2. 2nd Year Student, 1st Coll. Prize.
s 1892. 2nd Year Student, Half 1st and 2nd Coll. Prizes.
w 1892-3. 3rd Year Student, Half 3rd Coll. Prize.
s 1893 3rd Year Student, 2nd Coll. Prize.
Obstet. H.P.
- TODD, F. (1879). 21, Finsbury Circus. L.D.S., Dent. Surg. Roy. Free Hosp.
- TODD, H. J. McC. (1872). Staff Surg. R.N.
- TOLLER, N. P. F. (1885).
- TOLLER, S. G. (1885). M.D. Lond., M.R.C.P. Phys., and Prof. of Clin. Med. at Kasr-el-Aini Hospital, Cairo.
w 1885-6. 1st Year Student, 2nd Entrance Science Scholarship.
s 1886. 1st Year Student, 1st Coll. Prize.
w 1886-7. 2nd Year Student, Half 1st and 2nd Coll. Prizes.
w 1887-8. 3rd Year Student, 2nd Coll. Prize.
w 1888-9. 4th Year Student, The Mead Medal.
Asst. Phys.; Med. Regist., Demonstr. of Pract. Med., Res. Asst. Phys.
H.P., H.S., A.H.S., Jun. and Sen. Ophth.
H.S., Clin. Asst. Throat and Ear Depts.

- TOMBLESON, J. B. (1895). Overtown House, Spring Grove, Middlesex. B.A., M.B., B.Ch. Oxon. Obst. H.P.
- TOMPSETT, R. H. (1884). 304, Walworth Road.
- TOMSON, W. B. (1879). Park Street West, Luton, Beds. M.D. Durh.
w 1879-80. 1st Year Student, 2nd Coll. Prize.
s 1880. 1st Year Student, 2nd Coll. Prize.
w 1880-1. 2nd Year Student, The Musgrove Scholarship, Prosector's Prize.
w 1881-2. 3rd Year Student, 2nd Coll. Prize; 2nd Tenure of Musgrove Scholarship.
s 1882. 2nd Coll. Prize.
w 1882-3. Treasurer's Gold Medal. A.H.P.
- TONKING, J. H. (1882). Chapel St., Camborne, Cornwall. M.B. Lond.
w 1884-5. 3rd Year Student, Half 2nd and 3rd Coll. Prizes.
w 1885-6. 4th Year Student, The Cheselden Medal.
H.S., A.H.S., Clin. Asst. Ear Dept.
- TOOMBS, H. G. (1889). 24, Marloes Road, Kensington.
Ophth. H.S., Clin. Asst. Skin and Throat Depts.
- TOPPING, J. P. (1879). Clarence House, Teddington, Middlx. M.B., C.M. Glasg. D.P.H.
- TOTSUKA, K. (1881). Tokio, Japan. Deputy Inspector General of Hospitals, Imperial Japanese Navy. F.R.C.S.
s 1882. 1st Year Student, 2nd Coll. Prize.
w 1882-3. 2nd Year Student, Half Musgrove Scholarship and 1st Coll. Prize combined.
w 1883-4. 3rd Year Student, 2nd Tenure of Half Musgrove Scholarship, with 3rd Coll. Prize.
A.H.S.
- TOWNSEND, H. W. W. (1893). B.A. Cantab. Surg. R.N.
- TOWNSEND, M. (1865). 24, Upper Phillimore Place, Kensington.
- TREADWELL, O. F. N. (1878) Med. Off. H.M. Conv. Prison, Portland.
- TREDINNICK, E. (1871). Penlu House, Craven Arms, Salop.
- TREVES, E. (1866). 2, The Drive, Hove, Brighton.
- TREVES, W. K. (1862). 31, Dalby Square, Margate. F.R.C.S.
1863. Modern Languages and Modern History, Coll. Prize.
1865. 3rd Year Student, 2nd Coll. Prize Prosector's Prize.
H.S.
- TREVITHICK, E. G. (1886). 24, Promenade, Cheltenham. M.A., M.D., B.C. Cantab.
- TREVOR, H. O. (1877). Surg.-Maj. Army.
- TRIBE, A. G. (1888). Treorchy, Rhondda Valley.
- TRUMAN, C. E. (1871). 23, Old Burlington Street. M.A. Cantab.; L.D.S., Dent. Surg. St. Thos. Hosp., Surg. Dent. Hosp. Lond.
- TUKE, A. W. (1891). H.S., A.H.S.
- TURLE, A. (1870). Chipping Norton, Oxon.
- TURNER, F. C. 15, Finsbury Square. M.A., M.D. Cantab.; F.R.C.P., Phys. and Demonstr. of Path. Anat. Lond. Hosp. Res. Asst. Phys.
- TURNER, J. G. (1886). 12, George Street, Hanover Square. F.R.C.S., L.D.S.
- TURNER, R. (1852). Lewes, Sussex.
- TURNER, S. D. (1892). Obst. H.P.
- TURNEY, H. G. (1884). 68, Portland Place. M.A., M.D., B.Ch. Oxon.; F.R.C.P., F.R.C.S., Asst. Phys., Physn. to Electrical Dept., Joint Lecturer on Pathology and Forensic Medicine, Demonstrator of Morbid Anatomy. Teacher of Pract. Med., St. Thomas's Hospital.
w 1885-6. 2nd Year Student, 2nd Coll. Prize.
s 1886. 2nd Year Student, 2nd Coll. Prize.
w 1886-7. 3rd Year Student, 3rd Coll. Prize.
s 1887. 3rd Year Student, 1st Coll. Prize.
w 1887-8. The Mead Medal.
Res. Asst. Phys., H.S., H.P., Demonstrator of Morbid Histology.
- TYRRELL, F. A. C. (1892). B.A., M.B., B.C. Cantab. Ophth. H.S.
- TYRRELL, W. (1872). 104, Cromwell Road, South Kensington. Sen. Anæsthetist St. Thos. Hosp. Tel.: "Tyrrell, London." H.P., A.H.P., R.A.
- TYRRELL, W. (1850). Claremont, Gt. Malvern, and 122, Victoria Street, London.
1853. Ophthalmic Essay, Mr. Dixon's Prize.
1854. Surgical Reports, President's Prize. H.S.
- TYRRELL, W. G. B. (1878). Claremont, Great Malvern. D.P.H.
- UMNEY, W. F. (1885). Heatherbell, 15, Crystal Palace Park Road, Sydenham. M.D. Lond.
w 1887-8. 2nd Year Student, 1st Coll. Prize. H.P., Jun. and Sen. Obst. H.P., Clin. Asst. Skin Dept.

- USHER, C. H. (1888). 3, Bon Accord Square, Aberdeen. B.A., M.B., B.C. Cantab.; F.R.C.S. Edin.
Ophth. H.S., Clin. Asst. Throat Dept.
- USHER, T. S. (1855). Carlton House, Yeadon, Leeds. M.D. St. And.
- VALLANCEY, A. d'E. de. (1881). Willoughby House, Ravenscroft Park.
- VARDY, J. L. (1852). 72 and 74, Commercial Road, Portsmouth, and Portchester, Hants.
1855. Practical Midwifery, Prize.
- VERDON, E. S. (1886). Morocco. M.A., M.B., B.C. Cantab.
- VERDON, W. (1870). 47, Brixton Hill. M.D. Brux.; F.R.C.S. Eng.
Med. Regist., H.S., Asst. Demonstr. of Anat.
- VICKERS, K. B. J. (1887). Wellington, Salop. M.B. Lond.
- VIVIAN, G. E. (1876). Staindrop, Darlington, Durham.
- VIVIAN, J. H. P. (1884). 12, West Kensington Mansions.
- VORES, A. (1874). 49, Grange Park, Ealing.
- VULLIAMY, J. T. (1889). French Hospital, Shaftesbury Avenue.
- WADD, F. J. (1861). Prospect House, Richmond, Surrey. M.B., C.M. Aberd., Surg. H.S.H. the Duke of Teck, Surg. Richmond Hospital. R.A.
- WADD, H. R. (1887). Prospect House, Richmond, Surrey.
- WADES, J. W. B. Sydney, New South Wales. M.D., N.Y.; M.D. Aberd.
- WADIA, D. R. (1880). 49, Sopori Bang Road, Parel, Bombay.
- WAGSTAFFE, W. W. (1861). Purleigh, St. John's Hill, Sevenoaks, Kent. B.A. Lond., F.R.C.S.
1862. Matriculation Examination--Classics and Mathematics, President's Prize. Physics and Natural History, Coll. Prize;
Modern Languages, &c., Coll. Prize;
1st Year Student, Treasurer's Prize.
1863. 2nd Year Student, 1st Coll. Prize.
1864. 3rd Year Student, 1st Coll. Prize;
Physical Society's 3rd Year's Prize;
Cheselden Medal;
Treasurer's Gold Medal.
Sen. Asst. Surg., Lect. on Anat. and Res. Asst. Surg. St. Thos. Hosp., Mem. Board of Exam. R.C.S.E., Exam. in Arts Apoth. Hall, and Med. Insp. H.M. Privy Council.
- WAINWRIGHT, A. S. R. (1878). Pembury Lodge, Tottenham, Middlesex.
- WAINWRIGHT, W. L. (1886). Brixworth, Northampton. M.B., B.S. Lond.
H.S., A.H.S., Sen. and Jun. Obst. H.P.
- WAITES, R. F. (1885). East Bank, Rotherham. Lect. on Hygiene Rotherham Sch. of Sci.
- WAKEFIELD, M. J. (1884). 47, Christchurch Rd., Doncaster. M.B. Durh.
- WAKLEY, T., Jun. (1875). 5, Queen's Gate. Joint Editor of *The Lancet*.
- WALCOTT, R. B. (1839). Barbados, W. Indies. M.D. Lond., F.R.C.S.
- WALKER, A. W. H. (1886). Argyle House, Station Parade, Harrogate. M.D. Brux.
- WALKER, J. N. (1891).
- WALKER, R. F. (1883). The Lammas, Esher, Surrey.
- WALKER, Robt. (1853). Budleigh-Salterton, Devon. M.D. St. And.
- WALKER, W. W. (1890). 33, West Gate, Peterborough. B.A., M.B., B.C. Cantab.
- WALLACE, A. C. (1876). 1, Grange Terrace, The Grange, Guernsey.
- WALLACE, C. S. (1886). St. Thomas's Hospital. M.B., B.S. Lond., F.R.C.S., Resident Asst. Surg.
w 1887-8. 1st Year Student, Half 2nd Coll. Prize.
s 1888. 1st Year Student, 2nd Coll. Prize.
w 1888-9. 2nd Year Student, 1st Coll. Prize.
w 1889-90. 3rd Year Student, 2nd Coll. Prize.
Surgical Registrar, H.S., A.H.S., Sen. and Jun. Obst. H.P., Clin. Asst. Ear Dept.
- WALLACE, F. G. (1887). 104, Earl's Court Road. M.A., M.B., B.C. Cantab.
Non-Res. H.P.
- WALLACE, J. Carshalton, Surrey (retired).
- WALLACE, L. A. R. (1891). 24, Norfolk Crescent, Hyde Park. B.A., M.B. Oxon.
H.S., A.H.S., Clin. Asst. Ear & Skin Depts.
- WALLER, A. W. (1883). 31, London Road, Stroud, Gloucester. D.P.H.
- WALLER, W. B. 153, Seven Sisters Road, Holloway.
- WALLFORD, W. Brome-Walton, 61, Appach Rd., Josephine Avenue, Brixton Hill.
- WALTER, E. C. (1886). Market Place, Wallingford.
- WALTERS, F. R. (1875). 60, Welbeck Street, and Ferndale, Fairfield Road, Croydon. M.D., B.S. Lond.; M.R.C.P., F.R.C.S., Phys. N. Lond. Consump. Hosp. and City Disp. A.H.P., A.H.S.

- WARD, F. H. (1862). 8, Lyndhurst Villas, The Park, Ealing.
 1863. 1st Year Student, Treasurer's Prize.
 1864. 2nd Year Student, 1st Coll. Prize;
 Physical Society's 2nd Year's Prize.
 1865. 3rd Year Student, 1st Coll. Prize;
 Physical Society's 3rd Year's Prize;
 Cheselden Medal;
 Treasurer's Gold Medal.
- WARD, W. F. (1882). Bawtry, Yorks.
- WARD, W. T. (1876). Stanhope, Canada. M.D., C.M. Montreal.
- WARE, E. E. (1884). 143, Haverstock Hill. M.D., B.S. Lond.
 H.S., A.H.S.
- WARE, H. S. (1889). Holly Bank, King's Heath, Worc. B.A., M.B., B.C. Cantab.
- WARNER, A. (1891).
- WARREN, S. (1881). Kensington, Adelaide, S. Australia.
- WARRENER, R. (1850). Morborne, Peterborough. M.A. Cantab.
- WATERS, F. W. (1888). 23, Alma Road, Sheerness-on-Sea.
- WATERS, H. G. (1887). East Indian Ry. Co.
- WATERWORTH, E. A. (1865). 40, Quay St., Newport, I.W. M.D. Aberd.
- WATKINS-PITCHFORD, W. (1887). St. Jude's Vicarage, St. George's Rd., Southwark. M.B. Lond. F.R.C.S. H.P.
- WAY, F. W. (1852). Elm Grove, Southsea.
- WAY, J. H. F. (1886). 45, Fawcett Road, Southsea.
- WAY, J. P. (1860). Mile End Villa, Landport.
 R.A.
- WEARY, G. E. (1884).
- WEBB, F. (1890). Nelson Place, Newcastle-under-Lyme.
- WEBBER, W. W. (1876). Crewkerne, Somerset.
 w 1876-7. 1st Year Student, 3rd Coll. Prize.
- WEBSTER, E. (1883). 49, Ditchling Road, Brighton.
 w 1883-4. 1st Year Student, 1st Coll. Prize.
 s 1885. 2nd Year Student, Half 2nd Coll. Prize.
- WEBSTER, J. H. Churchdown, Cheltenham.
- WEBSTER, M. H. (1858). Grafton, New South Wales.
- WEEKES, F. H. (1873). 16, Gillygate, York. F.R.C.S.
 w 1873-4. 1st Year Student, 3rd Coll. Prize.
 s 1874. 3rd Coll. Prize.
 w 1874-5. 2nd Year Student, 2nd Coll. Prize.
 s 1875. 3rd Coll. Prize.
 w 1875-6. 3rd Year Student, 3rd Coll. Prize.
 H.S., R.A.
- WELCH, C. H. (1859). 46, Upp. Rock Gdns., Brighton. F.R.C.S. Edin.
- WELCH, R. W. F. (1881). 61, Oxford Street, Southampton.
- WELCHMAN, E. (1869). Heckington, Lincs.
 H.P., H.S.
- WELLBY, S. (1892).
- WELLS, A. E. (1877). Cuckfield, Sussex. M.D. Lond.
 w 1877-8. 1st Year Student, 2nd Entrance Science Scholarship.
 H.P., A.H.P., H.S., A.H.S., R.A.
- WELSFORD, G. F. (1880). Gotham House, Tiverton, Devon. B.A., M.B. Cantab.
- WEST, C. J. (1879). The Grove, Fulbeck, Grantham.
- WEST, R. H. (1870). 10, Station Road, Taunton. M.A. Cantab.
- WESTON, G. H. (1882). Forest Lodge, Shirley, Hants. M.B., D.P.H. Cantab.
- WHATELY, S. H. (1886). Washington, Durham.
- WHEATON, S. W. (1882). 76, The Chase, Clapham Common. M.D. Lond., M.R.C.P., D.P.H., Physician to the Royal Hospital for Children and Women. Med. Insp. Local Govt. Board.
 s 1885. 3rd Year Student, Half 1st and 2nd Coll. Prize.
 w 1885-6. 4th Year Student, The Mead Medal.
 H.P., R.A., Demonstr. of Physics.
- WHEELER, C. (1854). 96, Kennington Park Road.
- WHEELER, P. C. E. D'Erf. (1883). English Hospital, Jerusalem. M.D. Brux., F.R.C.S. Edin.
- WHEELER, M. (1892). 377, New North Road, Islington.
- WHELPTON, E. S. (1881). Gonville House, Beckenham Rd., Beckenham. M.A. Cantab.
- WHERRY, G. E. (1869). Corpus Bldgs., Cambridge. M.A., M.B., M.C. Cantab., F.R.C.S., Surg. Addenb. Hosp., Lect. on Surg. Univ. Camb. Asst. Demonstr. of Anat.
- WHICHELLO, E. (1892). Great Eversden, Cambridge. B.A., M.B., B.C. Cantab.
- WHICHELLO, H. (1888). The Mount, Tattenhall, Cheshire.

- WHISHAW, R. R. (1883.) Larkstone, Birdhurst Road, South Croydon. B.A., M.B., B.C. Cantab., F.R.C.S., Surg. Croydon Hosp.
- WHISTLER, Rev. C. W. (1875). Stockland Vicarage, Bridgwater, Somers.
- WHISTON, P. H. (1882). Surg. Capt. Army. D.P.H.
- WHITAKER, S. M. (1886).
- WHITE, C. H. (1872). 4, East Circus St., Park Row, Nottingham. R.A.
- WHITE, E. F. (1876). Westlands, 280, Upper Richmond Road, Putney. F.R.C.S. Anæsthetist., H.P., H.S., A.H.S.
- WHITE, F. (1889).
- WHITE, M. (1888). 3, Coninton Road, Lewisham.
- WHITEHEAD, E. T. (1886). Camperdown House, 118, Lavender Hill. w 1886-7. 1st Year Student, 2nd Coll. Prize. s 1888. 2nd Year Student, Half 2nd Coll. Prize.
- WHITEHEAD, J. L. (1860). Belgrave House, Ventnor, Isle of Wight. M.D. St. And.; M.R.C.P., J.P., Cons. Phys. Isle of Wight Co. Hosp. H.S.
- WHITMARSH, R. P. H. (1889). 7, St. Michael's Place, Brighton.
- WHITTINGTON, R. (1894). 100, Hazellville Road, Hornsey Lane. B.A., M.B., B.Ch. Oxon. Clin. Asst. Skin Dept.
- WICKHAM, G. H. (1885). Fleet, Hants. M.B., B.C. Cantab. H.P., Clin. Asst. Ear Dept.
- WIGHAM, W. H. (1884). South Molton, North Devon. M.B. Durh.
- WIGHTMAN, H. T. (1888). 580, Ecclesall Rd., Sheffield.
- WIGLESWORTH, J. (1878). Med. Superint. Co. Asyl. Rainhill, Lanc. M.D. Lond.; M.R.C.P., Lect. on Ment. Dis. Univ. Coll. Liverpool, Exam. in Ment. Dis. Victoria Univ.
- WILDE, L. (1883). Palace Chambers, Westminster. M.D. Durh.; M.R.C.P. Lond.; D.P.H.,; Med. Off. Health Bedfordshire County Council. Physician Croydon Boro' Hosp.
- WILES, J. (1848). Dep. Surg.-Gen. Army (retired).
- WILKINS, G. H. (1872). 134, Brixton Road. M.D. Durh.
- WILKINSON, C. J. (1879). Leh House, Osborne Road, Windsor.
- WILLIAMS, A. H. (1869). Surg.-Lt.-Col. Bengal Army. M.B., C.M. Aberd.
- WILLIAMS, A. W. (1891). 4, Lansdowne Road, Brighton. M.B., C.M. Edin., D.P.H.
- WILLIAMS, C. J. (1874). Brookside, Woodhall Spa, Linc.
- WILLIAMS, D. C. L. (1883).
- WILLIAMS, F. N. (1879). 181, High Street, Brentford.
- WILLIAMS, G. C. W. (1884). Dunstaffnage, 99, Wickham Rd., Brockley.
- WILLIAMS, G. F. C. (1874).
- WILLIAMS, H. (1867). Moor Park, Harrogate, Yorks. (not in practice). J.P. 1868. 1st Year Student, 2nd Coll. Prize. 1869. 2nd Year Student, 3rd Coll. Prize. H.S.
- WILLIAMS, H. B. (1886). 78, Lewisham High Road. M.D. Brux.
- WILLIAMS, J. (1857). Swinton, Manchester. M.D. St. And. 1859. Clinical Medicine, Prize.
- WILLIAMS, J. D. E. (1891).
- WILLIAMS, L. L. B. (1885). 8, York Street, Portman Square. M.B., C.M. Glasg.
- WILLIAMS, P. M. G. (1852). Parrag House, Newport, Pembroke. 1854. Practical Midwifery, Prize.
- WILLIAMS, R. B. (1886). Aston Clinton Rectory, Tring.
- WILLIAMS, R. M. (1879). 35, Kensington Park Gardens. M.D. Lond. w 1879-80. 1st Entrance Science Scholarship. H.P., A.H.P.
- WILLIS, C. F. (1871). Surg.-Maj. Bombay Army. M.D. Durh., M.R.C.P. Edin.
- WILLOCK, E. H. (1886). 113, London Road, Croydon.
- WILLS, B. S. (1892).
- WILLSON, H. S. (1890). Station Rd., Byfleet, and Weybridge, Surrey. B.A. M.B., B.C. Cantab.

- WILSON, A. (1880). 4, Coburg Terr., Anlaby Road, Hull.
- WILSON, A. MARIUS (1884). 1, Mill Street, Cape Town. M.D., B.S. Durh.
- WILSON, S. (1880). 262, Oldham Rd., Rochdale.
- WINDLEY, W. (1882). Colston-Bassett, Bingham, Notts. M.A. Cantab.
- WINDSOR, C. W. (1891). Royston, Herts. M.A., M.B., B.C. Cantab. H.P.
- WINDSOR, T. (1853). The Polygon, Ardwick, Manchester (retired).
- WINSTON, W. B. (1887). Cleveland House, Bounds Green Road, Bowes Park. B.Sc. Lond.
 w 1887-8. 1st Year Student, 2nd Entrance Science Scholarship.
 w 1888-9. 2nd Year Student, 2nd Coll. Prize.
 s 1889. 2nd Year Student, 1st Coll. Prize.
 w 1891-2. Solly Medal and Prize.
 Demonstr. of Physiology. Clin. Asst. Skin Dept.
- WINTERBURN, J. W. (1879). Clinton, Larkhall Rise, Clapham.
- WISHART, J. (1876). London, Ontario, Canada. F.R.C.S. Edin.
- WOAKES, A. B. (1880). 78, Harley Street. Surg. Lond. Throat Hosp.
- WOAKES, E. (1854). 78, Harley St., Cavendish Square. M.D. Lond. Sen. Aur. Surg. Lond. Hosp., Lect. on Aur. Surg. Lond. Hosp. Med. Sch.; Surg. Lond. Throat Hosp.
 1857. 2nd Year Student, 2nd Prize Clinical Medicine, Prize.
 1858. Essay on Neuralgia, Mr. N. Smith's Prize;
 Surgery and Surgical Anatomy, Cheselden Medal.
 H.S.
- WOLFF, A. (1870). 4, Ilchester Gdns., Prince's Square, Bayswater.
- WOOD, E. J. (1874). Yalding, Maidstone, Kent. B.A., M.B. Cantab.
- WOOD, J. (1884). The Gables, The Common, Cranleigh, Surrey.
- WOOD, R. (1841). Driffeld, Yorks. and The Red House, Robin Hood's Bay. M.D. St. And., J.P.
- WOODHOUSE, T. J. (1854). M.D. Lond., F.R.C.S.
- WOODHOUSE, T. P. (1874). Surg.-Maj. Army.
- WOODMAN, W. E. (1874). Oxford Lodge, Croydon. M.D. Durh.
 s 1875. 1st Year Student, 2nd Coll. Prize.
- WORTH, E. H. (1888). 28, Rowfant Road, Balham.
- WORTHINGTON, G. F. J. (1856). Thorncliffe, Poole Rd., Bournemouth. M.R.C.P.I.
- WRENCH, E. B. (1887). The Woodhouse, Bath St., Bakewell, Derby. M.B., B.C. Cantab.
- WRENCH, E. M. (1850). Park Lodge, Baslow, and Bakewell, Derbyshire. F.R.C.S.
 1851. Physical Society's Essay, Treasurer's 1st Year's Prize.
 Asst. R.A.
- WRIDE, F. G. (1867). Wootton Bassett, Wilts.
- WRIGHT, A. (1858). The Lodge, Romford, Essex.
- WRIGHT, E. H. (1882). Surg.-Capt. Madras Army.
 s 1885. 2nd Year Student, Half 2nd Coll. Prize.
- WRIGHT, S. F. (1884). St. Peter's Lodge, Eltham Road, Lee, Kent. M.D. Lond.
- *WRINCH, E. P. (1888). 19, Wide Bargate, Boston, Lincs. M.B., B.S. Durh.
- WROUGHTON, W. C. H. (1885).
- WYMAN, W. S. (1851). Red Brae, 18, Putney Hill. M.D. St. And., F.R.C.S.
 1852. Matriculation Examination, Scholarship.
- WYSARD, A. T. (1887). Surg. R.N.
- YEOMAN, C. (1883). Kipping House, Thornton, Bradford, Yorks. B.A., M.B., B.C. Cantab.
 R.A.
- YEOMAN, S. (1885). Clark's Hill, Prestwich, Manchester. B.A., M.B., B.C. Cantab.
- ZEIDAN, Selim. (1886).

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